

# **An Evaluation of The Bay Area Air Quality Management District's Air Pollution Control Program**



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## EXECUTIVE SUMMARY

In March through May 1997, staff of the Air Resources Board (ARB) conducted a program review of the Bay Area Air Quality Management District's (District) air pollution control program. This evaluation is one of several conducted as part of ARB's program evaluation program pursuant to authority granted in Section 41500 of the California Health and Safety Code.

The program evaluation was conducted to provide input on District strengths and weaknesses in critical program areas. The overall goal of the review was to find ways to improve the District's air pollution control program so as to improve air quality in the Bay Area and to allow the District to better meet mandated State and federal ambient air quality standards.

To obtain the information needed, ARB staff reviewed information in the District's files, interviewed key personnel, and inspected 30 industrial facilities, 41 dry cleaners, and 88 gasoline dispensing facilities and conducted 14 source tests at 11 facilities to determine compliance status. The review consisted of comparing the District's program elements against standard performance criteria for such elements. The criteria for enforcement and permitting sections have been developed by Compliance Division staff and are contained in a document titled *Criteria for Assessing District Enforcement and Permitting Adequacy*. The same criteria have been successfully used in program evaluations of other districts.

ARB staff evaluated the District's enforcement and permitting program in 1988. Hence, staff is able to understand the air quality challenges faced by the District and the progress made since our last evaluation. We are pleased to note that considerable progress has been made by the District in almost all permitting and enforcement areas evaluated compared to our findings of 1988.

The area under the District's jurisdiction exceeds the State health based standard for ozone and the U.S. EPA has proposed to redesignate the area nonattainment with respect to the federal ambient air quality standard for ozone. The area is designated nonattainment for the State PM10 standards. For air quality planning purposes under the California Clean Air Act, the District has been designated as a "moderate" area for ozone. Based on the 1995 emission inventory, mobile sources are a major source of ozone precursors in the Bay Area with 62% percent of reactive organic gases and 75% percent of oxides of nitrogen coming from mobile sources. With the introduction of cleaner fuels, and projected increase in area sources, it is apparent that the contribution to ozone formation from stationary sources will most likely become more significant in the future. With this in mind, we encourage the district to continue regulating all major oxides of nitrogen (NOx) emission sources, through its rule development and permitting processes. Currently,



the district has reduced NOx emissions from many sources such as boilers, internal combustion engines, and stationary gas turbines. We encourage the district to consider limiting NOx emissions from source categories such as incinerators operating at sewage treatment facilities. Recent source tests have indicated this source to be a significant NOx emitter.

The District currently has approximately 26,800 sources (approximately 8,000 facilities) under permit. At the time of our review, the District had approximately 312 staff, including 66 permit engineers and 54 inspectors. Within the enforcement division there are 13 supervisors and in the permit services division there are 14 supervisors. The number of staff at the District reached a high of approximately 375 three to four years ago. Staffing reductions have occurred since then. The District hopes to bring its staff level down to 300 employees by 1998.

Since program evaluations by their nature focus on identifying areas where improvements can be made, the accomplishments of an organization can often be overlooked. In this evaluation, several noteworthy accomplishments were observed in the existing District program. The District has a fully functional permit application tracking mechanism designed to meet legal time lines and has high quality engineering evaluations and operating permits. The District also has noteworthy agricultural burning, complaint handling, and breakdown investigation programs. The District's variance program follows all noticing requirements, tracks increments of progress on a computer database, and ensures that on-site final inspections are performed to determine compliance status. Based on our past experience of evaluating air programs, it is our determination that the overall performance of the Bay Area AQMD's permitting and enforcement programs is in the top 90 percentile of district programs reviewed to date.

In the following discussions, the findings include only the areas where there is room for improvement. In order to effectively implement the recommendations outlined in this report, an additional 10 person years should be redirected to the District's enforcement program. Even with the recommended staffing increase, resources available to the Enforcement Division will still be below the 1994 staff levels (approximately 125).

#### Enforcement Program

The District's enforcement program was evaluated with respect to inspections of permitted facilities, documentation requirements and adherence to internal District procedures. The District inspects its permitted sources on a frequency assigned by the emission potential of the particular emission source, from every six months (most frequent) to every four years (least frequent). "Source" in this context refers to an emissions point at a facility. This can result in some sources (within a facility) not



being inspected frequently enough. Our review in 1988 found that the District was conducting annual inspections for the majority of its permitted sources. We recommend that the District inspect all sources on an annual basis (at a minimum). Further, sources with annual emissions greater than 25 tons/year should be inspected on a quarterly basis.

The District does not always issue Violation Notices for all emission-related violations. This observation is based on joint inspections conducted by ARB staff and Bay Area inspectors in the category of autobody refinishing operations. This occurs because the District does not have a clear policy defining when a Notice to Comply or a Violation Notice should be issued for this source category. We recommend that the District clarify its guidelines on this matter for autobody refinishing operations. This will enable the field inspectors to take consistent and correct enforcement action by issuing the appropriate field notices when violations are encountered during the inspection process.

The District has established a system to assist cities and counties within its jurisdiction to comply with Government Code Section 65850.2. This Section of State law prohibits cities and counties from issuing final certificates of occupancy unless verification from the air district is obtained that the applicant has met all applicable air rules and regulations. The program devised by the District involves the filing of a two part "Inquiry Card". The bottom part is filled out by the city/county which makes a preliminary determination of the possible applicability of District rules to the new business. The top portion must be filled by the applicant and mailed to the District. On receipt of both cards, the District determines whether new business is subject to District regulations, including permit requirements. For the program to be fully effective, the "Inquiry Card" has to be filled out correctly and submitted to the District by both the source and the local government. District staff informed us that some local offices do not return the forms or participate in the program in a meaningful manner. The District may want to consider allocating additional staff for educating local governments about their responsibility under State law. For example, some local agencies have frequent turnover in their staff (dealing with certificates of occupancy), hence the need for making frequent presentations to city/county staff.

Considering that 16 percent of the District's violation caseload is derived from sources discovered to be operating without permits (this includes brand new businesses, new owners at existing business, or modifications made without District knowledge at existing permitted facilities), we recommend that additional resources be deployed for tracking unpermitted equipment. Identifying facilities at an early stage (when they apply for business license or certificate of occupancy) minimizes District resources required to find them later through more conventional means such as physical search of sectors or from business listings. It is also beneficial for the



source to be notified of the need to obtain permits at an early stage rather than operate in non-compliance for an extended period of time and thus increase its exposure to liability from the District or federal regulators. The existence of unpermitted sources is not unique to the Bay Area. Other districts also experience this problem. We recommend the District increase its efforts to locate unpermitted sources by working with other governmental jurisdictions, through surveillance activities, and focused industry searches in selected rule categories.

### Field Inspection Results under the Enforcement Program

Program Review staff completed inspections of 30 stationary (industrial) sources, selected portions of four refineries, 41 dry cleaning facilities, 16 autobody shops, and 88 gasoline dispensing facilities in cooperation with District inspectors as part of the field review portion of the District's program evaluation. The compliance rate from these categories is tabulated below followed by explanatory comments on the violation rates found for the categories under study. Detailed findings from the inspections have been collated in separate fact sheets which are contained in Appendix B. The District should work to improve the compliance rate among permitted sources to 95 percent or better. This could be achieved through a combination of more frequent source inspections, increased outreach (education and awareness), and appropriate enforcement action.

### **BAAQMD INSPECTION RESULTS**

Source Category	Facilities Inspected	Equipment Inspected	Violation Rate (Total)	Violation Rate (Emissions Related)
Miscellaneous Industrial Sources	30	347	6%	4%
Refineries				
Connector Leaks	3	873	4%	4%
All Other Applicable Rules	4	30	10%	3%
Source Tests Conducted	11	14	0%	0%
Retail Gasoline Dispensing Facilities				
Phase I - Underground Storage Tanks	66	191	16%	16%
Phase II - Booted Nozzles	50	967	19%	14%
Phase II - Bootless Nozzles				
A/L Defect Rate	8	57		35%
Non-Retail Gasoline Dispensing Facilities				
Phase I - Underground Storage Tanks	22	26	50%	50%
Phase II - Booted Nozzles	22	43	71%	48%
Dry Cleaners	41	43	79%	67%
Autobody	16	24	54%	42%



Source Category	Facilities Inspected	Equipment Inspected	Violation Rate (Total)	Violation Rate (Emissions Related)
Cargo Tanks	4	39	13%	8%

The compliance rate at the 30 mid and large-sized industrial facilities representing miscellaneous source categories (excluding refineries) was found to be very desirable at about 95 percent. This is in line with ARB's recommended target on this subject and superior to the compliance rate found in other districts for sources of this type and size category.

Inspections were also conducted at four refineries located in Contra Costa County. Due to time and resource constraints, the entire refinery was not inspected as part of the inspection. Instead, the inspectors selected a number of process areas within each refinery and inspected them (a total of 30 sources) for compliance with permit conditions and applicable rules. The principal violations found at the refinery sources were related to the incidence of VOC fugitive leaks from connectors in excess of the 100 ppm level allowable by District Rule 8-18 (Organic Compounds - Valves and Connectors at Petroleum Refinery Complexes). This rule defines a connector as a flanged, screwed, or other joined fitting used to connect two pipelines or a pipeline and a piece of process equipment. Our inspections revealed that 43 percent of the sources inspected in the refineries had at least one connector leaking organic compounds in excess of the 100 ppm rule standard. In terms of the total number of valves and connectors probed for leaks, the defect rate ranged from two to five percent at the different refineries visited by ARB staff. This also meets ARB's 95 percent compliance rate goal for field inspections. District inspectors issued Notices of Violation in these instances. We do not have historic data to compare the defect rate of fugitive leakage from valves and connectors found in the Bay Area to other districts because the allowable leakage level in this District is very low at 100 ppm. In other districts the corresponding leak standard is as high as 1,000 to 10,000 ppm.

In addition, the ARB source test team conducted a total of 14 source tests at 11 different facilities. Nine source tests were conducted at selected emission points located in six refineries. All sources tested as part of this program were found to be operating within the allowable permit limits. A 100 percent compliance rate was also observed for the vapor recovery units tested at three bulk loading terminals (for gasoline) and at two sulfuric acid plants source tested in Richmond and Martinez.

The defect rate for booted nozzles at 19 percent for retail gasoline dispensing facilities was higher compared to that found in other districts. The defect rate for the



Phase I component (underground storage tank drop tube, fill cap, and other components related to underground storage) of gasoline stations was considerably higher than that encountered by ARB staff in other districts. The high defect rate for the Phase I components (as compared to other districts) is in part due to the more stringent requirements imposed by the District on this category such as presence of gasoline (greater than one inch) in fill tank sumps and to the detailed, quality inspection techniques followed by the Bay Area inspectors. Nevertheless, the defect rate should be reduced to 5 percent or less. This could be done through a combination of more frequent inspections, increased outreach, and appropriate enforcement action. The defect rate at non-retail gasoline dispensing facilities was three times higher than that found at retail stations. We believe that the low compliance rate at the non-retail stations is the result of infrequent District presence at these sites. As a matter of policy, the District inspects non-retail stations once every two or three years while commercial stations are inspected on an annual basis (at a minimum). Limited as the data may be, it clearly supports the necessity of frequent inspections to achieve a high compliance rate and we recommend that annual inspections be implemented at these facilities.

The defect rate for Phase II controls for bootless nozzles at retail stations was found to be very high at 35 percent. We realize that the control of gasoline vapors through bootless nozzles is a new and fast emerging technology and we do not have historic data to compare the compliance rate of Phase II systems using such nozzles. However, we do recommend that these systems be field tested by the District periodically to ensure that they are operating at the mandated vapor recovery efficiency. The Air Resources Board has developed a screening method to determine the "A/L" value of bootless nozzles. The "A/L" ratio is an efficiency parameter for the gasoline vapor recovery of these systems. If the field tested "A/L" ratio does not conform to the range mandated in the applicable Executive Order, then the system is deemed to be operating at less than optimum efficiency. The test procedure has been reviewed by a technical committee of the California Air Pollution Control Officers Association and was circulated to the districts by the Air Resources Board Compliance Division on September 22, 1997. The proposed screening method utilizes simpler equipment, is less time consuming, and hence makes it easier for the districts to verify compliance of bootless systems. We recommend the District implement this procedure immediately.

The control of perchloroethylene (a toxic air contaminant) from dry cleaning systems is a relatively new control measure and high defect rates have been encountered throughout the State. A defect rate of 67 percent for emissions related violations was found in the Bay Area AQMD. The violation rate found in the sample study appears higher by about 17 to 45 percentage points than that found at dry cleaning facilities in two other air districts recently surveyed by ARB staff. However, a direct comparison of the results would be misleading and scientifically



incorrect. This is because a significant contributing factor to the high defect rate noted for emissions-related violations (primarily vapor and liquid leaks of perchloroethylene from the machine) in this study, as compared to other districts is related to the thorough inspection technique of the Bay Area inspectors and usage of sophisticated leak detection equipment. In the Bay Area, an inspection is not deemed complete unless the inspector has the opportunity to check for perchloroethylene leaks through a majority of the operating cycle of the machine. Hence, if an equipment leak exists it has an excellent chance of being detected by the Bay Area inspector. For non emissions-related defects, the outreach work done by Bay Area staff to improve compliance rates in this source category seems to have helped with improving the performance of dry cleaners with respect to administrative, recordkeeping, and work practice requirements. The defect rate for such violations at districts which did not inspect this source category on a regular basis or engage in an extensive outreach program was much higher (31 and 66 percent versus 12 percent for the Bay Area). Another category of small sources inspected during the program review was autobody shops. We found the defect rate of 54 percent in this category to be very high. This could be due to the high turnover rate of owners for this source category. Increased emphasis on source education and appropriate enforcement action may increase the compliance rate to a more acceptable level.

### Legal Action

The legal action program encompasses action taken by the District once a facility is documented to be in violation of District rules and regulations. The District has a policy and procedures document for the administration of its mutual settlement program.

Our experience with other districts indicates that an average "time to settlement" of less than 90 days is both achievable and desirable from the viewpoint of maintaining an effective enforcement program. By this standard, the District's settlement time figure of 78 days is good. Also, in all cases the District's main thrust is to bring the source back into compliance before negotiating any violation settlement.

We are however concerned that the District's average penalty settlement of \$480 per violation (based on 139 reviewed cases) is significantly lower than that found by ARB staff in other districts. A review of the District's case settlement schedule indicated that 85 percent (454/537) of the cases involving excess emissions or emission standard violations were settled for less than \$500. The low penalty levels may explain why few sources sought a settlement conference. For an emission-related violation, this amount does not provide enough deterrence to a source to remain in continuous compliance. It is our longstanding policy that in instances where violation notices are issued for emission-related violations, the



District should settle for penalties of \$500 or greater.

We recommend the District's baseline penalty amounts be increased to more accurately reflect the penalty amounts contained in Section(s) 42400 and 42402 of the Health and Safety Code. The baseline penalty amounts used in the District's algorithm have not seen any significant revisions or adjustments for inflation since 1990. Our detailed report on penalty amounts also recommends that the "multipliers" used in the District's penalty formulas for addressing the duration of each violation and the sources's past compliance history be also increased. Our review (based on 143 settled violation notices) revealed a high percentage of repeat as well as multi-day violations. Raising the surcharge on these categories may give a source more incentive to comply.

Currently the District does not seek a penalty for facilities discovered operating without valid Authorities to Construct or Permits to Operate. Instead, when such facilities are discovered, they are required to pay the accrued back fees and are assessed a one-time "late fee" equal to 100 percent of the initial fee (Rule 3-310). This fee pay-back system has not changed since we last reviewed the District's program in 1988. We support the District's collection of accrued back fees; however, there needs to be a penalty assessed which is explicitly identified as a penalty. The penalty should be more than simply the imposition of a "late fee" equal to 100% of the initial fee. We base this on the fact that 16 percent (223/1401) of the total violation notices issued in 1996 were to sources without valid permits. Therefore, we conclude that there is insufficient incentive for many sources to apply for a permit. A permit is important because it provides the district with a means of tracking and controlling emissions and establishing a level playing field for all sources subject to district regulations. We made similar comments in our 1988 review of the District's program.

### Variance Program

The District's Variance program was evaluated to determine its consistency with Health and Safety Code (HSC) requirements by which it is governed. A "variance" provides an individual or a company relief from enforcement action to fix a problem with their equipment that is causing them to be in violation of a District rule. Provided certain HSC criteria are met, a variance can be granted by the District Hearing Board. Generally, the District's role in this procedure is to provide consultation and technical expertise to both the Hearing Board and the petitioner, and to perform the administrative processing of petitions for variance.

A major concern with the administration of the variance program relates to the District Hearing Boards's long history of noncompliance with the Brown Act Open Meetings Law (Government Code Section 54590 et seq.). As far back as 1987,



ARB staff became aware that Hearing Board deliberations regarding variance petitions were not being done in public at the hearing, the entire deliberations were not being tape recorded to allow a factual account of the Hearing Board's decision to be referenced by Board staff in preparing the written order, and Hearing Board findings were not being made and voted upon on the record. It is our finding that for the period under review (1996), the Hearing Board had still not modified its practices to comply with the Brown Act, despite a 1988 legal opinion by the Office of the Attorney General of the State of California. The Attorney General's Office concluded that the Brown Act does require the hearing board deliberations to be conducted in public. This issue was discussed with the District's recently appointed General Counsel. He informed ARB staff that since assuming his position in October 1996, he has directed his office to take a pro-active approach to redress this longstanding issue. We are pleased to note that as a result of these efforts, the District's Board of Directors' promulgated a District-wide policy (Resolution No. 97-7 dated 4/16/97) regarding compliance with the Brown Act Open Meetings Law. ARB staff attended a variance hearing held in October 1997. At that hearing, deliberations were conducted in public in compliance with the requirements of this Act.

Other major recommendations to improve the variance program include the following: (1) interim variance petitions filed by sources should be processed by the District and heard by the Hearing Board; otherwise the opportunity for relief afforded under an interim variance is being denied by the District's inaction regarding the interim requests in violation of HSC 42350(a) and 42351(a), (2) operating conditions should be placed on the source in order to limit emissions coming from the source while they are under variance as required by HSC 42353, and (3) the weekly staff reports provided to the Legal Division should also be provided to the Hearing Board to provide them with background, emissions, and other information contained in the reports. Additional discussion on these and other recommendations is included in Chapter III.D, Variance Program.

### Permitting Program

The objective of the permitting program evaluation was to determine whether the District has been issuing permits in accordance with District Regulation 2 and with State law, to identify emission reduction opportunities available to the District and to improve the efficiency of the District's program. The following is a discussion of the main areas that have room for improvement.

Evaluation of best available control technology (BACT) is one area which can be improved by making procedural changes. The District has developed a workbook (last updated June 1995) to act as a guide in assisting staff in determining BACT requirements for sources which have triggered the District's New Source Review thresholds for BACT. The benefits of the workbook for the sources and the



District is the selection of BACT in a quick, consistent, and predictable manner. Our concern with placing principal or sole reliance on the BACT workbook is that BACT selected by the District permit engineers may not be the most stringent technology or emission limitation available at the time of evaluation. To avoid the above situation, District staff should check the current BACT status of an application by referring to other clearinghouses (South Coast, California Air Pollution Control Officers Association). Alternatively, the District's Workbook should be updated on a regular basis, all BACT evaluations should go through a central coordinator, and new BACT decisions/information should be circulated among staff engineers. It is important that every engineering evaluation contain a discussion which clearly states the reasoning for the District's choice of a particular technology and emission limits as meeting BACT criteria. A review of the files revealed that not all BACT decisions are accompanied with this type of justification. For example, if BACT II (or an intermediate level) is selected instead of the more stringent but technologically feasible/cost effective BACT I listed in the District's own Workbook, then the discussion should include a justification for selection of the less stringent option.

In general, some engineering evaluations could benefit by inclusion of additional details such as the basis for VOC content of solvents used (material safety data sheet, lab analysis), the reason for using AP 42 emission factors instead of actual source test data to calculate historical actual emissions for offsets or emission reduction credits, and using more explanatory notes to clarify calculation procedures. Permit Services Policy Guidelines should be maintained by the District and be circulated among the staff engineers. All policies should be approved by the Director, have a finite lifespan, or be incorporated into an approved public document. Even though the operating permits are of good quality, the District should develop a formal mechanism to conduct an annual review of permits to update them for enforceability and compliance with current law. This reevaluation is required by Health and Safety Code Section 42301 (e), but is not being done.

The District does not have a standard bank of permit conditions. A Manual of Model Permit Conditions is being developed. This will help to fine-tune some of the permit conditions being used and will standardize the process of assigning permit conditions to individual applications. The permits could be made more user friendly, especially to the smaller sources, by including key requirements from the applicable prohibitory rules as permit conditions. (Example, good housekeeping practices such as keeping solvent soaked rags in closed containers) The District should also ensure that all permits contain "legal type" conditions such as "right of entry" clause (which allows District, ARB, or EPA personnel to enter and inspect a facility), severability, etc.

We are particularly interested that requirements related to source testing (by type and size of equipment, need for initial test, frequency of subsequent source tests)



be standardized and included in the permit conditions manual or in the procedures handbook. The need for source testing a particular piece of equipment should be purely an engineering decision based on type and size of equipment, emissions potential, type of controls, existence of alternate ways to determine compliance, etc. Discussion with District staff revealed that source test requirements placed on permitted equipment were largely governed by the resources available to the District's in-house source testing team. It is District policy that all compliance source tests be conducted by their personnel. We have no problem with this system as long as sufficient resources are available to the District and this policy does not pose a bottleneck to the testing needs of the District's permitted universe. In practice, this is not true and source test needs are being compromised to accommodate available resources. We recommend that the Bay Area augment its own source testing capability by allowing approved independent source test contractors to conduct compliance source tests. Such contractors are used by facilities in the other 34 districts. Test protocols, actual tests, and final reports are reviewed/witnessed by district staff for quality assurance.







## ACKNOWLEDGMENT

The findings contained in this report were developed based on a review of office programs and field inspections. These activities, conducted over an eight week period, placed demands on the staff of the Bay Area Air Quality Management District (BAAQMD). In conducting the program evaluation, District staff assisted the Air Resources Board (ARB) staff through interviews and file reviews even though District staff were still required to perform their normal duties. We acknowledge the professionalism and cooperation of the District staff.

We also express thanks to the management and staff of the facilities we inspected as part of our program evaluation. Staff of all facilities were patient and accommodating during our field inspections. For this, we acknowledge industry in the District in the development of this report.







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## I. INTRODUCTION

The Bay Area Air Quality Management District (BAAQMD) program evaluation process began on February 18, 1997 with the transmittal of a notification letter to the District that the ARB Compliance Division would conduct a program evaluation of the District's enforcement and permitting programs. Upon mutual agreement, an entrance conference was held on February 20, 1997. During the conference, an evaluation outline was presented to District management. Air Resources Board (ARB) staff's presentation covered the method and content for the program evaluation, general logistics, and time lines related to the project. A detailed review of the air quality management activities of the BAAQMD was conducted from March 17, 1997 through May 9, 1997. This review was conducted as part of ARB's oversight role with respect to the local districts in California and is in accordance with Section 41500 of the Health and Safety Code. This evaluation is one of several that the Compliance Division conducts each year. The purpose of these evaluations is to identify program areas with the potential for improvement; identify non-compliance problems; and make recommendations for program improvement.

The District's jurisdiction is coincident with the lands contained in all of Marin, Napa, San Francisco, San Mateo, Alameda, Contra Costa, Santa Clara and the southern portion of Sonoma County and the western portion of Solano County comprising approximately 5,892 square miles. The climate of the area is governed by cool onshore winds with warmer temperatures inland in the summer and rains in the winter and spring.

The following table presents information on the District's air quality status.

Pollutant	Federal	State
Ozone (O3)	Moderate/Nonattainment	Nonattainment
Carbon Monoxide (CO)	Nonattainment *	Attainment
Nitrogen Dioxide (NO2)	Unclassified/Attainment	Attainment
Sulfur Dioxide (SO2)	Attainment	Attainment
Particulate Matter (PM-10)	Unclassified	Nonattainment

\* The rural areas of the District are in attainment for the federal CO standard.

The program evaluation focused on four areas: (a) the compliance status of selected sources with the requirements of applicable rules and permits, (b) the adequacy of the tools used to evaluate a source's compliance status, (c) the adequacy

of programs that support compliance inspections and other emission control efforts, and (d) the adequacy of the District's permit and new source review rules in reducing, limiting, or eliminating emissions from new and modified stationary sources.

In any kind of program evaluation, the evaluators usually concentrate on identifying areas for improvement and in developing recommendations, which, when implemented, will result in improved program effectiveness. In this evaluation, some needed improvements were identified by ARB staff. To provide a proper perspective, however, a section of the report highlighting some of the District's accomplishments has been included. These accomplishments are cited only for those program areas reviewed. Recommendations presented in subsequent sections of this report are offered to indicate what can be pursued to increase program effectiveness for the areas reviewed.

The Compliance Evaluation and the Permitting Evaluation are presented in Sections III and IV, respectively. These sections include the staff findings, a discussion of each finding, the standard ARB criteria upon which the evaluations were made, and recommendations for improvement.



## II. ACCOMPLISHMENTS

- o District inspectors overall breadth of knowledge for gasoline delivery facilities (Rule 8-7) and perchloroethylene dry cleaning operations (Rule 11-16) was substantial and surpassed those observed in other districts in the State.
- o Installation of laptop computers into inspectors' vehicles has put the District into the forefront of communications and should allow the District to improve effectiveness and process information more readily.
- o The District's fugitive emission standard for connectors (flanges, Rule 8-18-303) at 100 ppm is the most stringent in the State.
- o The District's requirement prohibiting greater than one inch of gasoline product in fill tank sumps (Rule 8-7-308) is the most stringent of its kind in the State.
- o The District's establishment and implementation of the Permit Review Workgroup to resolve troublesome permit conditions is a good development and should improve the quality of conditions attached to Permits to Operate.
- o The District has an infrastructure which facilitates uniform processing of permit applications in a timely manner. All legal time lines for processing applications and issuing notifications are being satisfied.
- o The District has an excellent data management system whereby an application is tracked from the time it comes into the system until the permit is issued. All files requested by ARB staff were readily accessible.
- o Generally, the engineering evaluations are comprehensive and display a good understanding of the project by the permit engineer. Issued permits are of good quality and can qualify as "stand alone" documents.





### III. COMPLIANCE PROGRAM EVALUATION INTRODUCTION

The compliance evaluation consisted of two phases: (a) an office review of District programs, and (b) field inspections of selected sources. The office review was conducted between March 17 and April 4, 1997. In this phase, ARB staff interviewed District staff, reviewed the District's policies, procedures and guidelines and reviewed District files.

The objective of the office review was to determine the extent to which the District was meeting ARB's criteria for an effective air pollution control program. Areas evaluated included: the District's enforcement, legal action, complaint handling, variance, source testing, continuous emission monitoring, agricultural/open burning, data management, rules/regulations, equipment breakdown and permitting programs.

The second phase of the evaluation, the field inspections, was conducted between April 14 and May 9, 1997. The field inspections consisted of 41 perchloroethylene dry cleaning facilities, 30 industrial facilities, 88 gasoline service stations, and four gasoline loading racks at gasoline distribution outlets. Additionally, 11 industrial operations were source tested for compliance determinations as well.

The objectives of the field inspections were to determine the compliance status of the inspected sources and to evaluate the District's inspection techniques. Additional information on the field inspections may be found in Chapter III. A., Section E. And in the field inspection summaries (Appendix B).

## A. ENFORCEMENT

The enforcement element of the evaluation consists of the field inspection and compliance verification components of District operations. In operating its enforcement program, the District ensures that its permitted facilities are in compliance with the applicable rules and regulations. In implementing this program, the District inspects facilities in its permit system and takes enforcement action against those facilities documented to be in violation.

The District's enforcement program was evaluated with respect to inspection of permitted facilities, documentation requirements, and adherence to District procedures. To accomplish this task, Compliance Division staff reviewed 40 completed inspection reports prepared in 1996, interviewed District management and staff, reviewed selected enforcement policies and reviewed District files. ARB and District staff jointly conducted compliance inspections of 30 industrial facilities, 41 perchloroethylene dry cleaning establishments, 16 automotive refinishing operations, four refineries, four loading racks, 72 booted gasoline vapor recovery systems at gasoline stations and 16 bootless vapor recovery systems at gasoline service stations. Compliance Division personnel conducted compliance source tests at 11 industrial facilities. The inspection results are discussed in Section E of this chapter.

### A. GENERAL COMMENTS

Sources are inspected on a variable frequency from every six months to every 48 months depending upon each source's air quality impact potential as identified by the District's inspection targeting program (High-Intensity Inspection Targeting System, HITS). This program evaluates the emission potential of individual sources and assigns an inspection frequency accordingly. A source, in this context, means an emission source at a permitted facility, not the entire facility. It is possible that several sources at a facility may have different inspection frequencies assigned. Inspectors are advised by the district's computer system of upcoming due inspections for assigned sources and they inspect these sources. With very few exceptions, all inspections are unannounced.

ARB staff determined that the District undertakes good documentation of violations discovered and that virtually all inspections are unannounced. Staff also determined that good coordination exists between the Enforcement and the Technical Services Division in terms of items of joint responsibility such as source tests, breakdown determinations, incident and episode determinations and cargo tank leak determinations. ARB staff conducted 11 source tests at industrial facilities. The units tested were in compliance with their permitted emission limits.



## B. INSPECTION REQUIREMENTS

### a. Findings

The District conducts annual inspections for its major sources; minor sources are inspected on a less frequent schedule. The District does not conduct quarterly inspections for those facilities whose actual annual emissions are greater than 25 tons/year. Virtually all of the District's inspections are unannounced.

### b. Discussion

The District conducts annual inspections for its major sources; minor sources may be inspected on a less frequent schedule. The District prioritizes its inspections by assigning an inspection frequency based on each source's emission potential. U.S. EPA defines a major source as a source with the potential to emit greater than 100 tons/year or those that have actual emissions of greater than 25 tons/year. The prioritization scheme was developed by the District as a resource planning tool. Using this tool, some sources, (e.g., a storage tank at a refinery storing water or sulphuric acid) may be inspected on a 48-month frequency (minimal air quality impact) while a gasoline loading rack at a gasoline distribution terminal is inspected every six months. ARB staff review of 40 completed inspection reports from 1996 revealed that the District's inspections meet EPA requirements for a thorough inspection (Level II).

The District does not inspect its sources with emissions greater than 25 tons/year on a quarterly basis as ARB evaluation criteria recommends. As described in the prior paragraph, major sources are inspected on an annual basis. The major sources that are inspected more than once/year are petroleum refineries, power plants and those major sources with an on-going non-compliance problem. Gasoline loading racks are inspected every six months. For gasoline dispensing facilities (gdfs) with a history of high non-compliance, the District inspects these facilities every three months until their non-compliance rate improves. In the District, facilities are subdivided into emission points (called sources) and each source is assigned an inspection frequency by the High-Intensity Inspection Targeting System (HITS) program. Inspectors are advised monthly as to what "sources" are due for inspection in the coming month and which sources may be late in receiving their inspection. Supervising field inspectors are also aware of any late inspections and ensure that any deficiencies are rectified.

Virtually all of the District's inspections are conducted unannounced. In discussion with Division management, it was revealed that only Lawrence Livermore Laboratory (LLL), a U.S. Dept. of Energy facility, requires prior notification for security reasons. All other inspections are unannounced by the District.

c. Criteria

All sources under district permit shall be inspected at a minimum annually. The annual inspection shall not be less than a Level II inspection as defined in EPA's Inspection Frequency Guidance (March 31, 1988). All sources with actual emissions greater than 25 tons/year shall be inspected on a quarterly basis. The District shall conduct at least 75 percent of its inspections unannounced.

d. Recommendation

- o All sources with actual annual emissions greater than 25 tons/year should be inspected on a quarterly basis.

C. DOCUMENTATION REQUIREMENTS

a. Findings

The District's violation notices (VNs) and Notices to Comply (NTCs) are thoroughly documented. The District has inspection guidelines and conducts its inspections consistent with these guidelines. The District has and uses written procedures for evidence/sample collection and chain of custody requirements.

b. Discussion

The District's violation notices (VNs) are thoroughly documented and serve the District well. Staff reviewed 143 VNs issued in 1996 and found that all VNs contain: the issuance date/time, the source number, the rule violated, the inspector's name, the name and address of the corporate official, the source contact's signature, and a brief description of the violation. In the legal action review, staff determined that the District's VNs are thoroughly documented and can proceed to a courtroom if necessary.

The District has established inspection guidelines for rule categories in its jurisdiction. These guidelines cover facilities/operations such as Gasoline Dispensing Facilities, Motor Vehicle and Mobile Equipment Coating Operations, Bulk Gasoline Distribution Facilities and Gasoline Delivery Vehicles, Asbestos Demolition/Renovation Waste Disposal Inspections, Coating of Flat Wood Paneling, Wood Flat Stock and Wood Products Coatings, Solid Waste Landfill Sites, and Open Burning. Essentially, the District has developed guidelines for a majority of its rules and regulations. Review of completed inspection reports from 1996 revealed that the District utilizes these guidelines in conducting its inspections.



The District also has guidelines for the issuance of VNs and NTCs. The guidelines include general principles for the issuance of VNs and NTCs and also incorporate rule-specific examples which identify where the issuance of NTCs are appropriate for “minor violations”. For additional information relative to NTCs, refer to Section D.

The District has and uses written procedures for evidence/sample collection and chain of custody requirements. While staff review of 40 completed inspection reports from 1996 did not reveal any that resulted in sample extraction, staff interviewed District management and confirmed that the District employs written procedures (Policies and Procedures, Section X, Sampling Guidelines) for its chain of custody requirements.

#### c. Criteria

The district shall issue Notices of Violation (NOVs) for all emission-related violations including recordkeeping when the recordkeeping data is necessary to determine whether an emission violation has occurred. Notices to Comply (NTCs) shall only be issued for non-emission related violations. NTCs shall be tracked and returns to compliance documented for all sources receiving NOVs and NTCs. NOVs shall be well documented and include the data, time, permit number, rule violated, inspector’s name, name and address of the corporate official, source contact’s signature, and a brief description of the violation. Inspections shall be conducted in a manner consistent with the district’s inspection guidelines. These guidelines shall include a thorough description on the use of multi-day violations and include procedures on how to handle same. The district shall have and use written procedures for evidence/sample collection and chain of custody.

#### d. Recommendation

None.

### D. INTERNAL DISTRICT PROCEDURES

#### a. Findings

The District issues violation notices (VNs) for all violations documented, lesser violations (non-emissions related) receive Notices to Comply (NTCs). The District has a program for locating unpermitted facilities/equipment which needs improvement. The District receives memos from the Technical Services Division (TSD) recommending enforcement action on source tests, CEM/GLM reports, Field

Accuracy Tests and leak checks on gasoline cargo tanks. The District has a quality assurance/quality control (QA/QC) element in its enforcement program. The District periodically updates permit conditions attached to permits to operate.

#### b. Discussion

The District issues VNs or NTCs for all violations documented, lesser violations (recordkeeping, open containers, solvent-containing rags left uncovered) receive NTCs. ARB staff documented that the District issued 1,401 VNs covering 1,776 violation counts in 1996 and issued 392 NTCs in the same time period. ARB staff reviewed 143 VNs (10.2 percent) of the 1,401 VNs issued in 1996. For further information on VNs, refer to Section III. B, Legal Action. Review of the VNs issued revealed that 20 of these were issued for source test failures (usually as a permit condition violation, Rule 2-1-307). In 1996 the District conducted 174 source tests and documented 22 failures (two tests did not result in VN issuance due to problems related to testing).

Review of the issued VNs in 1996 revealed that the top five rule category violations are shown in Table III-1 following.

**Table III-1  
Top Five Rule Category Violations**

Rule Number, Description	# of VNs	% of Total
8-45, Automotive Refinish	270	19.2
8-7, Gasoline Dispensing	210	15
2-1-301-2, General Rqmts.	223	15.9
2-1-307, Permit Conditions	83	5.9
11-2, Asbestos D/R/M	72	5.1

The number of VNs issued to automotive refinishing operations, to gasoline dispensing facilities and to facilities with unpermitted equipment are high because the District had recently completed specific training on automotive refinishing operations and, according to District management, the automotive refinishing and gasoline dispensing communities exhibit frequent changes of ownership without notifying the District leading to issuance of VNs for operating without the required permits.

Review of the District's Notice to Comply Guidelines revealed that for violations listed on NTCs the District allows the facility either 15 or 30 days to



return to compliance. In situations where all other operations were in compliance, the inspector may not return to the facility until the next scheduled inspection and some NTC deficiencies could go unresolved until that date. The District receives information via fax and regular mail that will also indicate a facilities return to compliance.

The District has a program in place for locating unpermitted facilities/equipment in conjunction with local government. All local government entities use a two-piece tear off contact card with identical tracking numbers that is given to all prospective applicants. The applicant tears off the bottom and sends it to the District with his/her application and the local government keeps the other half. The Permit Services Division periodically checks with local government to resolve differences between what the District receives with applications and what the local government received.

In 1996 the District issued 223 VNs (15.9 percent of the total VNs issued) for violations of either Rule 2-1-301 (Authority to Construct - A/C), 2-1-302 (Permit to Operate - P/O) or both. For specific information relative to permit violations, refer to Table III-2 following.

**Table III-2**  
**Permit Related Violations**

Rule Number, Description	# of VNs	% of Total
2-1-301-2, No A/C or P/O	183	82
1-441/2-1-302, Info - P/O	40	18

Roughly 82 percent of the 223 VNs issued were specifically for installing and/or operating equipment without the required A/Cs and P/Os, an indication that either the facilities are not informing the District when modifications occur or the government location program identifying new facilities subject to air permits has not achieved full success. Discussions with District management indicated that ownership of gasoline dispensing facilities and autobody refinishing operations frequently changes with the new owner not notifying the District of the change of ownership. ARB staff review of the issued VNs for Rules 2-1-301/302 revealed that 75/223 (34 percent) were for gasoline dispensing facilities, 58/223 (26 percent) were for autobody refinishing operations, 9/223 (4 percent) were for dry cleaning facilities and 81/223 (36 percent) were for other industrial operations.

As resources allow, District inspectors conduct grid inspections in their respective sectors for unpermitted facilities. On routine annual inspections,

inspectors may also encounter unpermitted equipment at permitted facilities and appropriate enforcement action is taken. The District, through its Enforcement and Permit Services Divisions, needs to examine alternatives to increase its effectiveness in locating unpermitted facilities/equipment.

ARB staff reviewed the interaction between the District's Technical Services and Enforcement Divisions with respect to enforcement actions for source tests, evaluation of Continuous Emission Monitor (CEM)/Ground Level Monitor (GLM) incident data, CEM Field Accuracy Tests (FATs) and for cargo tank leak determinations. In each of these instances, TSD staff: (1) conducts the source test, (2) evaluates CEM data, (3) interprets GLM data, or (4) conducts leak checks on gasoline cargo tanks at bulk terminal loading racks. TSD staff conducts the source test, calculates the results and forwards a recommendation (memo) for enforcement action to the Enforcement Division which takes final action. Of the 174 source tests conducted by TSD staff in 1996, 22 were recommended for enforcement action. Eighteen VNs were issued, 16 were settled, one VN was voided, one was NFAed, one is pending and three are still in the settlement process.

For Continuous Emission Monitoring (Incident Reporting), the District issued 125 VNs and settled 99 of these. Nineteen incidents covering 26 VNs were still in the settlement process as of April 1997. As mentioned above, TSD staff evaluates the CEM data from incident reports and prepares a recommendation memo to Enforcement for specific action. The same process occurs for GLM reports with the recommendation being made by staff meteorologists in TSD. For CE monitor accuracy verification, the District conducts Field Accuracy Tests (FATs) of CEMs operating in the District. In 1996, the District issued ten VNS, eight were settled. Two VNs are still in the settlement process. As before, TSD staff conducts the testing and forwards a memo to Enforcement recommending action.

TSD staff tests gasoline cargo tanks for leak integrity at bulk gasoline loading racks throughout the District. In 1996, TSD staff documented 11 violations of Rule 8-33-305 (Gasoline Bulk Terminals & Gasoline Delivery Vehicles). TSD staff gives the driver a form indicating that he/she is in violation and advising them not to load gasoline cargo until they return the cargo tank to compliance. As above, a memo is sent to Enforcement recommending action and Enforcement makes the final decision and issues the VN.

The District has a quality assurance/quality control (QA/QC) element in its enforcement program. From interviews with District management and from review of District files, ARB staff determined that the first level of review occurs at the supervising field inspector level. A second tier of review occurs with the enforcement specialist who reviews the VN for technical correctness and gathers rule-specific statistics. Additional review of VNs occurs in the Mutual Settlement



Program. ARB staff review of 40 completed inspection reports revealed that all reports had a supervisor's sign off indicating that the review had occurred. Inspection reports and complaint investigation reports that are deficient are returned to inspectors for correction.

The District enforcement staff periodically recommends updating permit conditions attached to permits to operate. This activity occurs on the initial Authority to Construct (A/C) to Permit to Operate (P/O) inspection and annually on renewal inspections. When inspectors encounter problems with permit conditions (interpretation of conditions, clarity, unenforceability, etc.) these conditions are referred to supervising field inspectors who bring them to the Permit Review Workgroup. This workgroup, consisting of management staff from Enforcement, Technical Services and Permit Services Divisions, attempts to resolve these reported problems. If the problem is significant, then that particular condition will be referred to Permit Services for action which likely will include a modification to the permit condition. This workgroup has operated for one year; it appears to be working successfully.

#### c. Criteria

The district shall issue Notices of Violation (NOVs) for all violations documented. The district shall have a quality assurance/quality control element in its enforcement program to ensure that it is allocating its resources appropriately. The district shall review and ensure that all permit conditions are periodically updated to determine if such conditions need revising, deletion or modification as allowed under Section 42301(e) of the Health and Safety Code.

#### d. Recommendations

- o Increase the effectiveness of the program for locating unpermitted facilities or equipment especially for small facilities. Target the gasoline dispensing facility and autobody refinishing source communities by using a combination of enforcement and outreach activities to educate these sources on the need to have valid permits.
- o Continue to use the Permit Review Workgroup for evaluation and resolution of troublesome permit conditions.

## E. COMPLIANCE INSPECTIONS

### a. Findings and General Discussion of Inspection Results

Our inspection findings for the 183 facilities inspected are provided below followed by explanatory comments on the violation rates found for the categories under study.

#### BAAQMD INSPECTION RESULTS

Source Category	Facilities Inspected	Equipment Inspected	Violation Rate (Total)	Violation Rate (Emissions Related)
Miscellaneous Industrial Sources	30	347	6%	4%
Refineries				
Connector Leaks	3	873	4%	4%
All Other Applicable Rules	4	30	10%	3%
Source Tests Conducted	11	14	0%	0%
Retail Gasoline Dispensing Facilities				
Phase I - Underground Storage Tanks	66	191	16%	16%
Phase II - Booted Nozzles	50	967	19%	14%
Phase II - Bootless Nozzles				
A/L Defect Rate	8	57		35%
Non-Retail Gasoline Dispensing Facilities				
Phase I - Underground Storage Tanks	22	26	50%	50%
Phase II - Booted Nozzles	22	43	71%	48%
Dry Cleaners	41	43	79%	67%
Autobody	16	24	54%	42%
Cargo Tanks	4	39	13%	8%

The compliance rate at the 30 mid and large-sized industrial facilities representing miscellaneous source categories (excluding refineries) was found to be very desirable at about 95 percent. This is in line with ARB's recommended target on this subject and superior to the compliance rate found in other districts for sources of this type and size category.

Inspections were also conducted at four refineries located in Contra Costa County. The inspectors selected a number of process areas within each refinery and inspected them (a total of 30 sources) for compliance with permit conditions and applicable rules. The principal violations found at the refinery sources were related to the incidence of VOC fugitive leaks from connectors in excess of the 100 ppm



level allowable by District Rule 8-18 (Organic Compounds - Valves and Connectors at Petroleum Refinery Complexes). This rule defines a connector as a flanged, screwed, or other joined fitting used to connect two pipelines or a pipeline and a piece of process equipment. Our inspections revealed that 43 percent of the sources inspected in the refineries had at least one connector leaking organic compounds in excess of the 100 ppm rule standard. In terms of the total number of valves and connectors probed for leaks, the defect rate ranged from two to five percent at the different refineries visited by ARB staff. This also meets ARB's 95 percent compliance rate goal for field inspections.

In addition, the ARB source test team conducted a total of 14 source tests at 11 different facilities. Nine source tests were conducted at selected emission points located in six refineries. All sources tested as part of this program were found to be operating within the allowable permit limits. A 100 percent compliance rate was also observed for the vapor recovery units tested at three bulk loading terminals (for gasoline) and at two sulfuric acid plants source tested in Richmond and Martinez.

The defect rate for booted nozzles at 19 percent for retail gasoline dispensing facilities was higher compared to that found in other districts. The defect rate for the Phase I component (underground storage tank drop tube, fill cap, and other components related to underground storage) of gasoline stations was considerably higher than that encountered by ARB staff in other districts. The high defect rate for the Phase I components (as compared to other districts) is in part due to the more stringent requirements imposed by the District on this category such as presence of gasoline (greater than one inch) in fill tank sumps and to the detailed, quality inspection techniques followed by the Bay Area inspectors. Nevertheless, the defect rate should be reduced to 5 percent or less.

The defect rate at non-retail gasoline dispensing facilities was three times higher than that found at retail stations. We believe that the low compliance rate at the non-retail stations is the result of infrequent District presence at these sites. Limited as the data may be, it clearly supports the necessity of frequent inspections to achieve a high compliance rate and we recommend that annual inspections be implemented at these facilities.

The defect rate for Phase II controls for bootless nozzles at retail stations was found to be very high at 35 percent. We realize that the control of gasoline vapors through bootless nozzles is a new and fast emerging technology and we do not have historic data to compare the compliance rate of Phase II systems using such nozzles. However, we do recommend that these systems be field tested by the District periodically to ensure that they are operating at the mandated vapor recovery efficiency. The Air Resources Board has developed a screening method to determine the "A/L" value of bootless nozzles. The proposed screening method utilizes simpler

equipment, is less time consuming, and hence makes it easier for the districts to verify compliance of bootless systems.

The control of perchloroethylene (a toxic air contaminant) from dry cleaning systems is a relatively new control measure and high defect rates have been encountered throughout the State. A defect rate of 67 percent for emissions related violations was found in the Bay Area AQMD. A significant contributing factor to the high defect rate noted for emissions-related violations (primarily vapor and liquid leaks of perchloroethylene from the machine) in this study, as compared to other districts is related to the thorough inspection technique of the Bay Area inspectors and usage of sophisticated leak detection equipment. In the Bay Area, an inspection is not deemed complete unless the inspector has the opportunity to check for perchloroethylene leaks through a majority of the operating cycle of the machine. Hence, if an equipment leak exists it has an excellent chance of being detected by the Bay Area inspector.

Another category of small sources inspected during the program review was autobody shops. We found the defect rate of 54 percent in this category to be very high. This could be due to the high turnover rate of owners for this source category. Increased emphasis on source education and appropriate enforcement action may increase the compliance rate to a more acceptable level.

We note that the District inspectors were very knowledgeable about the rules which they must enforce and conducted thorough, technically competent inspections. They also took the opportunity to provide compliance assistance literature to each source on our joint inspections.

#### b. Discussion

##### 1. Gasoline Dispensing Facilities

###### Retail Operations

ARB and District staff jointly inspected 66 retail gasoline dispensing facilities to determine compliance with Phase I vapor recovery requirements. A total of 191 tanks were inspected with the violation rate documented to be 16 percent. Violations documented included: spilled gasoline product in sump - 17, broken/missing vapor cap - 3, broken/missing product fill cap - 3, broken coaxial fill tube gasket - 1, broken O-ring adaptor - 1, short fill tube - 1, and broken coaxial vapor poppet - 1. All violations documented were considered to be emissions-related. For further information relative to retail Phase I vapor recovery inspections, refer to Appendix B-2-1.



ARB and District staff jointly inspected 66 retail gasoline dispensing facilities to determine compliance with Phase II vapor recovery requirements. A total of 967 gasoline nozzle systems were inspected with the total violation rate documented at 19 percent. Emission-related violations (14 percent) documented were: damaged/missing faceplates - 56, damaged/missing bellows - 35, broken/cut vapor hose - 26, improperly installed/missing liquid removal systems - 11, damaged/leaking nozzles - 7, damaged/missing vapor check valves - 5, damaged/missing ring rivet spring - 5, damaged/missing interlock mechanism - 3, damaged modulating valve - 1, and damaged/torn product hose - 1. Non-emission-related violations (five percent) documented were: hold-open latch - 7, weak/broken retractors - 9, improper hose configuration - 10, improperly installed/missing breakaway - 4, frozen pump swivels - 4, frozen nozzle swivels - 3, and not posting current Permit - 3. For further information relative to the retail Phase II vapor recovery inspections, refer to Appendix B-2-1.

### Non-retail Operations

ARB and District staff jointly inspected 22 non-retail gasoline dispensing facilities to determine compliance with Phase I vapor recovery requirements. A total of 26 gasoline storage tanks were inspected with 13 (50 percent) being in violation. Violations documented included: gasoline product in sump - 3, defective coaxial vapor poppet - 3, no pressure gauge at vent pipe - 2, no keys to tanks - 1, broken/missing fill cap - 1, broken/missing fill cap gasket - 1, broken/missing vapor cap - 1, broken/missing vapor cap gasket - 1, short product fill tube - 1, and no permit for tank - 1. All violations listed except pressure gauges for vent pipe, keys for tank, and no permit for tank were considered to be emission-related. For further information relative to non-retail Phase I vapor recovery inspections, refer to Appendix B-2-2.

ARB and District staff inspected the same 22 non-retail facilities for Phase II vapor recovery requirements. Violations were documented for 30/42 (71 percent) nozzle systems inspected with 20/42 (48 percent) being emission-related. Emission-related violations included: torn/missing bellows - 8, torn/missing faceplates - 4, defective/missing vapor check valves - 3, torn vapor hose - 3, and nozzle body problems - 2. Non-emission-related violations (23 percent) included: retractors - 11, hose configuration - 12, frozen nozzle swivels - 2, frozen pump swivels - 2, no keys - 1, invalid P/O - 1, and not posting P/O - 1. A review of this and the prior paragraph reveals that the overall non-compliance rate for non-retail gasoline dispensing facilities is quite high (50 percent for Phase I and 48 percent for Phase II). Discussions with District staff indicated that the District does not routinely inspect these facilities. The high non-compliance rates (especially at car rental agencies) demonstrates the need for annual or even more frequent inspections for these facilities. For additional information relative to Phase II inspections at non-retail

facilities, refer to Appendix B-2-2.

Concurrent with the gasoline dispensing facility inspections, inspection teams documented eight facilities that had switched from booted systems to bootless systems without obtaining the required Authority to Construct. These facilities were included in the overall Phase I compliance statistics. Also, five facilities were not inspected by the joint ARB/District teams, but were later inspected by the District. These facilities were not included in the overall compliance statistics. Charts listing these facilities are located in Appendix B-2-1 under "Bootless Phase II Vapor Recovery Systems Inspected - No A/L Testing," and "Stations Not Inspected by ARB."

### Bootless Vapor Recovery Systems - A/L Testing

Inspections were conducted at eight gasoline service stations utilizing "bootless" vapor recovery systems. These facilities were included in the overall Phase I compliance statistics. A total of 57 vapor recovery nozzles were tested to determine if they met the required Air to Liquid (A/L) ranges specified in the Executive Orders certifying these systems. Of the 57 nozzles tested, defects were documented at 20 nozzles which caused the nozzles to operate out of the required A/L range for a defect rate of 35 percent. ARB staff tested each nozzle with a Roots meter, a graduated gasoline storage tank, appropriate fill neck adaptors, and a timing device. A District inspector observed these tests and issued VNs and NTCs to those facilities where violations of Rule 8-7 were documented. VNs were not issued to those facilities failing the A/L tests. For additional information relative to the "bootless" vapor recovery system inspections, refer to Appendix B-2-3.

## 2. Dry Cleaning

Forty-one perchloroethylene dry cleaning operations were inspected to determine whether these facilities were complying with District Rule 11-16 (Perchloroethylene and Synthetic Solvent Dry Cleaning Operations) and Section 93109 of Titles 17 and 26 of the California Code of Regulations (Air Toxic Control Measure, ATCM). An overall non-compliance rate of 79 percent with 67 percent being emission-related was documented. Seven facilities were documented to be in compliance with all aspects of the rule. Violations documented included: perc vapor leaks - 64 at 20 machines, liquid leaks - two at two machines, open containers of lint - 5, open containers of waste water - 4, primary control system missing - 2, and open containers of per and muck - one each. Non-emission related violations documented were: recordkeeping - 32 counts at 19 facilities, training certificates missing - 4, leak detectors missing - 4, leak check not conducted - 3, 45 F temperature requirement not met - 2, P/O not posted - 1, and no P/O - 1. District inspectors used portable hand-held Photovac Multipoint perc vapor leak detectors for leak detection. District



inspectors issued VNs or NTCs for most violations documented, but did not always issue NTCs for vapor leaks less than 200 ppm. ARB staff was impressed with the District's breadth of knowledge and expertise in perchloroethylene dry cleaning operations. For additional information relative to the perchloroethylene dry cleaning inspections, refer to Appendix B-2-4.

### 3. Refineries

Portions of four refineries were inspected between April 14-25, 1997. Thirty sources were inspected for compliance with permit conditions and applicable rules. Violations were documented at 15 sources (50 percent). The principal violations found were related to the incidence of VOC fugitive leaks from connectors in excess of the 100 ppm level allowable by District Rule 8-18-303 (Organic Compounds-Valves and Connectors at Petroleum Refinery Complexes). Our inspections revealed that 13 (43 percent) of the sources inspected had at least one connector leaking organic compounds in excess of the 100 ppm rule standard. In terms of the total number of valves and connectors probed for leaks (873), the defect rate was four percent. It should be noted that the District's regulation for VOC fugitive leaks from connectors is the most stringent in the State. The remainder of the violations found at the refineries pertained to missing leak inspection records, a leak from a wastewater separator and delayed access to a storage tank. District inspectors issued VNs or NTCs for all violations documented. For additional information relative to the refinery inspections, refer to Appendix B-2-6.

### 4. Other Industrial Facilities

Thirty industrial operations were inspected between April 14 - 25, 1997 for compliance determination with District permit requirements. Industrial operations inspected included a wide range of sources such as power plants, a sugar factory, a cement manufacturing operation, a glass manufacturing operation, a roofing company, a printing operation, a disc drive manufacturer, a landfill, and both wood and metal coating operations. Violations were documented for six percent with four percent being emission-related. District inspectors issued VNs or NTCs for documented violations. For additional information relative to the industrial inspections, refer to Appendix B-2-5.

### 5. Auto Refinishers

Sixteen automotive refinishing operations were inspected between April 14 - 25, 1997. Overall 54 percent of the equipment units inspected were in violation with 42 percent having emission-related violations. Violation notices (VNs) were issued

for: high VOC content of coatings - 5, inadequate/missing coating records - 4, open containers - 1, no P/O -1, no weekly records - 1, and an inadequate filtration system - 1. Notices to Comply (NTCs) were issued for: open containers - 5, no solvent logs - 2, inadequate coating records - 2, not meeting monthly totals - 1, solvent rags - 1, and for a permit condition - 1. An examination of this data appears to indicate that the District's policy for Rule 8-45 is inconsistent in that both VNs and NTCs are issued for open containers (one VN vs. five NTCs) and for inadequate/missing coating records (four VNs vs. 2 NTCs). The District inspectors issued VNs or NTCs for all violations documented. For additional information relative to the automotive refinishing inspections, refer to Appendix B-2-7.

#### 6. Gasoline Cargo Tanks/Loading Racks

Four gasoline loading racks serving cargo tank operations were inspected between April 9 - 11, 1997. At these facilities, 39 cargo tanks were inspected with 23 cargo tanks being leak tested (ARB sniffer test) and all 39 cargo tanks being inspected for certification requirements. Of the 23 cargo tanks that were leak tested, three vapor leaks were documented for a 13 percent non-compliance rate. For the cargo tank certification checks, two cargo tanks were documented as not being certified for a non-compliance rate of five percent. Three Notices of Violation (NOVs) were issued by ARB. For additional information relative to the cargo tank inspections, refer to Appendix B-2-8.

#### 7. Source Tests Conducted

Eleven industrial operations were source tested for compliance determination purposes between April 9 - April 24, 1997. These units included three vapor recovery systems at bulk loading terminals, one fluidized catalytic cracking unit (FCCUs - a coker and two CO furnaces), four sulfur recovery units (SRUs), three CO boilers, two sulfuric acid plants, one boiler, and a coke calciner. All units tested were documented to be operating in compliance with their individual permit requirements. For additional information relative to the source tests conducted, refer to Appendix B-2-9.

##### c. Criteria

District stationary sources shall demonstrate a 95 percent compliance rate at all times.

##### d. Recommendations

- o Improve the non-compliance rate of bootless vapor recovery systems at those stations that employ such systems.



- o Improve the non-compliance rate for Phase I and II vapor recovery systems at non-retail gasoline dispensing facilities by inspecting these facilities at least on an annual basis.
- o Improve the non-compliance rate for perchloroethylene dry cleaning operations to a figure substantially better and follow the District's policy for issuing VNs for leaks less than 200 ppm.
- o Improve the non-compliance rate for automotive refinishing operations and clarify the policy inconsistencies in terms of issuance of VNs or NTCs for open containers and for inadequate/missing coating records.
- o Incorporate use of retractable steel measuring tapes in conducting submerged fill pipe compliance determinations at Rule 8-7 operations.





## **B. LEGAL ACTION PROGRAM**

The legal action program encompasses enforcement actions taken by the District once a source is documented to be in violation of District rules and regulations. The legal action program ensures that violation notices (VNs) issued are settled for penalties commensurate with the magnitude of the violations documented. The program is a necessary and valuable component of the District's enforcement program and assists in deterring future violations. The program also helps to "level the playing field" and ensures that all sources are treated fairly.

The legal action program was evaluated with respect to the existence of policies for the day-to-day administration of the mutual settlement program, for documentation required in the mutual settlement program, and for overall program effectiveness. For 1996, the legal action program handled 1,401 violation notices issued covering 1,776 violation counts. ARB staff reviewed 143 (10.2 percent) of the violations issued. The mutual settlement program was transferred from the Enforcement Division to the District's Legal Office in June 1997.

### **A. GENERAL COMMENTS**

One area of the program which needs improvement is the percent of cases that result in no further action (NFA). Approximately 24 percent of all VNs handled resulted in NFA. Most of these (223 or 66 percent of those NFAed) are cases where the source was documented to be operating without a valid Authority to Construct (A/C) or Permit to Operate (P/O - Rule 2-1-301/2). We also found that cases are resolved for lower penalties when compared to other districts' legal action programs and that most baseline penalty amounts have not increased since 1990.

Overall, the District's legal action program is well administered. The documentation present in the case files would allow cases to proceed to the courtroom if necessary. The District's policy document for its mutual settlement program addresses all ARB evaluation criteria elements. The District has a written protocol or memoranda of understanding with the Contra Costa District Attorney for referral of cases that cannot be resolved through the mutual settlement program or through the District's Legal Office. Other cases are handled on a case-by-case basis with local District Attorneys' Offices.

## B. POLICIES FOR THE MUTUAL SETTLEMENT PROGRAM

### a. Findings

The District has a policy and procedures document for the administration of its mutual settlement program. The District policy and procedures document contains a penalty policy and penalty schedule. The schedule has not been amended significantly since 1990, so in 1990 dollars penalty amounts assessed have fallen. This policy and procedures document addresses multi-day violations. The policy and procedures document does not address written protocols with local District Attorneys' Offices.

### b. Discussion

The District has an adequate policy and procedures document for the administration of its mutual settlement program entitled "Mutual Settlement Program", dated August 23, 1996. Staff involved in the mutual settlement program use this document in the day-to-day activities common to the program. As part of its policy and procedure document, the District has a penalty schedule which lists violations for each rule, section and subsection. District staff use the penalty schedule in setting the baseline penalty for each violation notice using the primary rule violated. Examples could include a violation of Rule 2-1-307 (General Requirements, Permit Conditions) where the baseline penalty is \$313 or Rule 6-301 (Visible Emissions) where the baseline penalty is \$188. Once the baseline is established, the District looks at the source's past violation history, the duration of the violation and establishes a penalty offer for each violation based on the sum of the baseline, history surcharge and duration surcharge. It should be noted that the baseline penalty schedule has not changed significantly since 1990, so in 1990 dollars baseline penalties have actually decreased.

A facility's past violation history is considered by the District's history surcharge. The history surcharge looks at the past two year violation history for the facility and addresses violations of the same rule, same regulation, same rule section, same source and same source type. The history surcharge is calculated by using the following formula:

<u>Violation</u>	<u>Percent of Base</u>
Same Regulation	10
Same Rule	20
Same Section	5
Same Source Type	5
Same Source	5

These percentages are additive and this sum is multiplied by the baseline charge to arrive at the history surcharge for each violation via an algorithm in the District's computer-run penalty calculation. The algorithm will depreciate prior violations occurring close to the start of the two-year window on a sliding arithmetic scale. The District may wish to change the percent of base for "Same Section" and "Same Source Type" from 5 percent to 10 percent each in order to raise the penalty figures from repeat violations. From staff's review of 143 settled VNs it appears that these changes would produce tangible results. Specifically, we have found a high percentage of repeat violations and believe that raising the surcharge for these may give a source more incentive to comply. ARB staff was able to obtain good agreement between the algorithm and hand calculating the penalty.

As alluded to in the prior paragraph, the District addresses multi-day violations by looking at the duration of the violation via its duration surcharge. The following formula is used for calculating the duration surcharge:

(30%)(baseline + history surcharge)(# of days) - (1 to 20 days)  
(60%)(baseline + history surcharge)(# of days) - (21 to 30 days)  
(100%)(baseline + history surcharge)(# of days) - (31 days plus).

The duration surcharge is added to the history surcharge and the baseline charge to arrive at the penalty offer presented to the source. Examples could include a coating violation where records review documents that the facility had a non-compliance period of six days over the last month. The calculation would yield  $0.30 \times \$250$  - baseline for 8-19-302  $\times$  six days = \$450. The District may wish to change the percentage from 30 percent to 50 percent for violations covering 1- 20 days and from 60 percent to 75 percent for violations covering 21- 30 days in order to raise the penalty amounts for multi-day violations. Staff review of 143 settled VNs determined that ten percent are multi-day violations. Raising these two amounts should help deter multi-day violations. Along with raising the history surcharge and the baseline penalties, the increased amounts should encourage higher compliance rates.

The District's policy and procedures document does not address written protocols or memoranda of understanding with local District Attorneys' Offices for the referral of cases that cannot be resolved through the mutual settlement program or by in-house Counsel. The District will refer specific types of cases (penalties > \$1,000, NSPS/NESHAP, variance cases) to its Legal Office for settlement. The District will work with local District Attorneys' Offices in the handling of specific cases and has done so on several occasions (Unocal, General Chemical for example). The District has an established protocol with the Contra Costa District Attorney's Office for the referral of cases that cannot be handled through the District's mutual settlement program or in-house by District Counsel. The District may wish to



establish other protocols for referral of cases to other local District Attorneys.

c. Criteria

The district shall have a penalty policy which recommends a dollar amount for settling a violation. The penalty amount shall be based on a penalty schedule which reflects the eight criteria contained in Section 42403 of the Health and Safety Code. The penalty amount shall be included in the penalty letter as an offer for settling the violation. The district shall establish and use policies, procedures and guidelines for the administration of the district's mutual settlement program and use these same policies for the settlement of multi-day violations as part of the district's overall policies, procedures and guidelines for the administration of its mutual settlement program. The district shall ensure that inspectors and case developers/investigators work together to recognize and document (By follow-up inspection of records) possible multi-day violations. The district shall have written protocols with the County Counsel and the District Attorney for referring cases that cannot be resolved through the mutual settlement program.

d. Recommendations

- o Change the "Percent of Base" figure from five percent to 10 percent for the "Same Section" and "Same Source Type" violations to discourage repeat violations.
- o Change the Duration Surcharge formula by raising the multiplier from 30 percent to 50 percent for violations between one and 20 days and from 60 percent to 75 percent for violations covering 21 - 30 days to discourage multi-day violations.
- o Raise baseline penalty amounts.
- o Consider establishing a written protocol or memoranda of understanding between the District and the eight other local District Attorneys' Offices for the referral of cases that cannot be resolved in-house.

C. DOCUMENTATION REQUIREMENTS

a. Findings

The District has an established mutual settlement program which provides for a settlement letter to be sent to all violators for which penalty action is being pursued.

The settlement letter offers to settle the violation for a specific dollar amount and provides for an office conference if the source requests one. A release letter is sent once the penalty settlement is received.

The District maintains a legal action log on computer for storage and retrieval of information relative to issued violation notices. The log contains information (data fields) on: (1) the VN issuance date, (2) the VN number, (3) the name of the facility/individual, (4) the rule violated, (5) the penalty offer made, (6) comments relative to the violation, (7) the status of the violation and (8) the date of the follow-up inspection.

#### b. Discussion

Interviews with District management and staff and reviews of case files determined that the District has an established mutual settlement program in place which provides for a settlement letter to be sent to each source for which the District is pursuing penalty action. Those sources for which the District is not pursuing penalty action receive a No Further Action (NFA) letter. The settlement letter provides an opportunity for an office conference if the violator requests one; staff only encountered one case in the 143 reviewed during the study period where this occurred. A release letter is sent out by the District once the penalty payment is received.

The District maintains a legal action log on its computer system for storage and retrieval of information relative to issued violation notices. This log contains information (data fields) on the seven items listed above plus additional information that can be retrieved with specific requests.

#### c. Criteria

The district shall have a mutual settlement program which provides for the issuance of a penalty letter for all violations not referred for litigation, provides for the responsible party to request an office conference to discuss extenuating circumstances concerning the violation, and provides for a release letter once the case is settled. The district shall have a legal action log which tracks the legal actions in progress. The log should include the date the NOV was issued, the NOV number, the facility name, the rule violated, the disposition of the NOV and the date of such disposition, and the date of the follow-up inspection to ensure compliance. The district shall implement and maintain a system for tracking all violations from NOV issuance to final settlement or other actions such as cancellation, voiding or no further action.

#### d. Recommendation

None.

### D. PROGRAM EFFECTIVENESS

#### a. Findings

The District's baseline penalty schedule is low when compared to that contained in Sections 42400 - 42402.3 of the California Health and Safety Code. A majority of the penalties issued are less than \$500. The District's no further action ratio was 24 percent based on a review of the legal action log and case files. The District log tracks the disposition of all violations issued including those that were canceled, voided or resulted in no further action.

#### b. Discussion

The District's baseline penalty schedule is low compared to penalties allowable in Sections 42400 - 42402.3 of the California Health and Safety Code. A review of the District's penalty schedule revealed that only 108/946 (11.4 percent) of the total penalty amounts listed were \$500 or more. The last time that the District revisited the baseline penalty schedule was on April 9, 1996 when 12 penalties were changed. Prior to that, one penalty was changed on October 1, 1993 and 279 were changed on May 1, 1990. The baseline penalties range from \$34 to \$25,000 with the majority in the \$125 to \$375 range. For penalties covering emissions (Section 300), 454/537 (84.5 percent) were < \$500, eight = \$500 and 75 (14 percent) > \$500. Since 1990, inflation has reduced the value of a dollar to \$0.83 in the Bay Area according to "The Economic Report of the Governor, 1997." The low penalty levels may explain why few facilities sought a settlement conference. It may also help explain the high non-compliance levels among many of the facilities we inspected. It is time to consider revisiting the penalty schedule to raise the baseline penalty settlements to assist in deterring continued non-compliance. Suggested changes to the District's calculation formulae for History Surcharge and Duration Surcharge were previously made in Section B, POLICIES FOR THE MUTUAL SETTLEMENT PROGRAM.

Review of the District's no further action (NFA) ratio was conducted and determined to be 24 percent. Of this 24 percent, 223 (66 percent of those NFAed) violation notices were issued for not having a valid Authority to Construct or Permit to Operate or both. The District routes these permit violations to the Permit Services Division, where, by procedure, a late fee (100 percent of initial P/O fee) is assessed, back A/C and P/O fees are determined and assessed and the current A/C and P/O fees are billed. An application number is issued and, if the facility is new, a facility ID



number is assigned. The Enforcement Division does not pursue penalty settlements on these cases. The District should consider augmenting its coordinated effort with local government to locate and permit existing and new unpermitted facilities/equipment, and should establish a specific penalty amount designed to encourage compliance with the permitting requirements.

ARB staff reviewed 143 violation notices comprising 10.2 percent of the 1,401 issued in 1996. Violations are thoroughly documented in all cases and settlement action is not initiated until the source returns to compliance. For specific information relative to the cases reviewed, refer to Table III-4 following.

**Table III-4  
Mutual Settlement Program Case Review**

Statistic	Number	% age	Refinery related
Number Cases Reviewed	143	10.2	20
Ave. Penalty Settlement	\$480	n/a	\$ 641
Time to Settlement	78 days	n/a	78 days
Multi-day Violations	15	10	2
Repeat Violations	47	31	20
NFA Actions	50	24	1
Penalty Reductions	8	5	4

Staff determined that the average penalty settlement, where a penalty was assessed, was lower than other districts' settlement averages. The average was \$480. This average does not include \$170,000 for four violations against one facility, a cogeneration operation. Including these settlements yields an average of \$2,128 per violation. The time to settlement was good compared to other districts in the State. Although the NFA figure is high compared to ARB's target of ten percent, this figure is influenced by the District's policy of assessing late fees rather than penalties for not having permits (Rule 2-1-301/302), certain recordkeeping requirements (first time Rule 8-45 records) and other non-emission violations. Penalty reductions were examined and found only to represent five percent for those cases reviewed.

The District's legal action log adequately tracks all violations issued including those that resulted in NFA, cancellation or voiding. The log allows for specialized tracking based on whatever input parameters are entered. Staff requested District staff to search for several different parameters (start date, stop date, NFA,

settled out of court (SOC), canceled, etc.) and District staff was able to handle these requests with relative ease.

c. Criteria

To ensure the deterrent effect of the district's mutual settlement program, the baseline penalty settlement amounts shall be in line with those provided in Sections 42400, 42400.1, 42400.2 and 42402 - 42402.3 of the Health and Safety Code. In no instance should baseline penalty settlements be less than \$500. The district shall ensure that NOV's which are canceled, voided or resulted in no further action are less than ten percent of the NOV's issued. The district shall provide information in the case file and in the legal action log (the latter in a shorter version) as to way the case was dismissed, canceled, etc.

d. Recommendations

- o Raise baseline penalty settlements for the majority of violation penalties.
- o Initiate penalty actions for discovering unpermitted equipment and/or facilities for Rule(s) 2-1-301/302.
- o Strengthen the District's existing program in the Permit Services Division to locate unpermitted facilities/equipment in conjunction with local government in the Bay Area. Consider targeting the gasoline dispensing and autobody refinishing facilities in this effort through coordinated enforcement and outreach activities.
- o Explore ways to lower the District's NFA ratio to a figure closer to ten percent.

## C. COMPLAINT PROGRAM

Air pollution complaints received by the District are an indispensable source of information. Timely and attentive response to air pollution complaints is crucial to ensure protection of public health and maintain public trust in that protection. More than just notification from the public that a perceived problem exists, the specific observations of a public complainant can provide valuable clues about the daily operations and compliance status of industrial sources. Complaints are usually related to injury, nuisance, or annoyance caused by some type of air contaminant. The District also receives complaints which are not necessarily affecting any particular person but are intended to inform the District that a source may be operating out of compliance with District rules and regulations.

The District's complaint program was evaluated with respect to receipt, evaluation, response, and resolution of air quality complaints. In order to do this, Compliance Division staff reviewed District policy and procedure documents, database recordkeeping and complaint reports. Of the 5,064 complaints received by the District during 1996, 105 were selected at random for review. District staff were also interviewed to ensure that actual practice is consistent with rule requirements and District policy.

### A. GENERAL COMMENTS

The District's complaint handling program is efficiently computerized via database and is well administered by written policy and procedure. The District is aware of the importance of its complaint program and places a high priority on responding to and investigating all of the complaints that appear to fall within the scope of the District's authority. District staff will also respond to those complaints where the District has shared authority. The District investigates greater than 80% of complaints within 24 hours, with the vast majority being responded to within less than one hour. Where applicable, complainants are contacted and notified of investigation results. ARB staff is not aware of any complaint cases existing in the District which have not been either already handled by the District or referred by the District to another more appropriate agency.

### B. RECEIPT OF COMPLAINTS

#### a. Findings

Complaint procedures and guidelines exist and meet ARB criteria. All complaints are logged into the computer database and this function appears to meet



ARB criteria. The District has an excellent system for tracking complaints. Procedure ensures supervisory verification that all complaints are investigated, completed, and reviewed.

b. Discussion

The District has thorough written procedures and guidelines for consistent complaint handling. These procedures are divided into seven sections: Complaint Dispatch, Field Investigation, Violation Notice Criteria, Public Nuisance, Odorous Emissions - Regulation 7, Complaint Reports, and Complaint Forms. Complaints are normally received by Enforcement Services on the District's toll free number (800) 334-ODOR. The vast majority of complaints received by the District are odor complaints. After receiving the call from the complainant, the complaint is entered into the computer, which automatically assigns the complaint with a complaint number to the Area Inspector or Alternate Inspector, who is dispatched as soon as possible but no later than thirty minutes after being notified of the complaint.

The Responding Inspector (R/I) uses a designated complaint report form that includes all relevant information required by ARB criteria. This form includes a box used for review and tracking confirmation, and the box must include the initials from supervisory review, data entry, and any applicable update activity. The report form is scanned into the complaint database then retained for six months, after which, it is shredded. The use of the initialing box provides the checklist to ensure that documentation from every complaint proceeds through the same procedural guidelines. Any supplementary information later obtained by any District staff is easily entered directly into the database. Every complaint is able to be tracked, back tracked, indexed, and cross referenced as desired through the database.

c. Criteria

Complaint procedures and guidelines shall be developed that ensure consistency in all areas of the complaint handling program. All complaints reported to the District shall be logged in a manner that includes all relevant information. The District shall have a mechanism to verify that all complaints are investigated, completed, and complaint reports submitted to the supervising inspector. These complaint activities shall be adequately tracked. Complaint reports shall be reviewed for adequacy, thoroughness, and completeness by a supervising inspector.

d. Recommendation

None.

## C. COMPLAINT INVESTIGATION

### a. Finding

The District investigates all of the complaints it receives. Greater than 80% of complaints are investigated within 24 hours. On-site investigations of complaints are conducted in almost all cases. Complaint investigations include good documentation. Where applicable, all relevant information required by ARB criteria is included in complaint investigation reports. All complaint reports are typed into a database.

### b. Discussion

Greater than 80% of complaints are field investigated within 24 hours. Many complaint response times are within 15 minutes of when the area inspector is dispatched. Inspectors often contact and interview the complainant by cellular phone while en route to the complaint location. At times when the complainant is not at home at the time of inspector response, the R/I will leave their business card in a door knob card holder as notification that the District has investigated and so that the complainant may later directly contact the R/I. Sometimes, in the case of odor complaints that were unable to be confirmed, the investigation and complainant interview are one in the same, with a single visit to the complainant at the complaint location. Adequate documentation is frequently obtained over a period of time as R/I and complainant communication allows. The District has initiated the purchase of portable laptop computers to facilitate direct database information entry and retrieval by the inspector while out in the field.

### c. Criteria

The District shall investigate all complaints; 90% of the complaints shall be investigated within 24 hours after they are received. At least 90% of all complaints shall be investigated by a physical on site investigation and an interview of the complainant. Adequate documentation shall be provided for all complaint investigations.

### d. Recommendations

- o The District should continue to work toward an increased percent of investigating complaints within 24 hours.
- o The District should consider examining trends in inspector time spent on complaint response. If trend data indicates increases in industrial activity and/or increases in residential growth, and a correlation with

increased inspector time spent, this trend data could be useful in predicting future District staffing needs and area wide growth planning.

#### D. COMPLAINT RESOLUTION

##### a. Findings

Where applicable, VNs are issued for violations discovered during complaint investigations. Follow-up complaint investigations are conducted when necessary. Where applicable, complainants are contacted and notified of investigation results. The District has Regulation 7 (Odorous Substances), to address the issue of public nuisance caused by chronic odor emissions by a source. Regulation 7 is an effective way to ensure a level playing field for all sources that have potential to cause an odor-related public nuisance. Regulation 7 formalizes the application of public nuisance law as it applies to odors and it removes the discretionary elements historically shown to cloud legal interpretation.

##### b. Discussion

If during a complaint investigation the inspector observes a violation of a district regulation such as excessive visible emissions, the applicable regulation is cited in the VN. In cases where a public nuisance exists as well as a violation of another district regulation such as excessive visible emissions, the inspectors are instructed to consult their Supervising Inspector to determine whether one or more violations should be cited. The District may also issue a VN in cases of an obvious public emergency, such as a forced evacuation, even though complaints have not been received.

Follow-up investigations are conducted and complainants are notified of investigation progress or results. Sometimes, in the case of odor complaints that are unable to be confirmed, the investigation and notification to the complainant are one in the same, with a single visit to the complainant at the complaint location.

The majority of complaints received by the District are regarding nuisance odors against stationary sources. For most nuisances state law and District regulations require that a considerable number of people be affected before a violation can be determined. The District defines a considerable or significant number of people as more than five.

In the BAAQMD nuisance prosecution is augmented by the District's use of its Regulation 7 (Odorous Substances). This regulation controls odors from those



facilities that can emit odors that would disturb the local citizenry. When the District receives greater than ten complaints in a 90-day period, then the procedure described in the paragraph below applies. When the source's complaints reduce to less than one per year, then the procedure deactivates.

A sample outside of the source's property line is taken (monitor sample) and this odor is introduced to an odor panel. The odor panel is comprised of District lay personnel who have been subjected to odor sensitivity training beforehand. If greater than a specific amount of a given compound (dimethyl sulfide, ammonia, mercaptans, phenolic compounds or trimethylamine) is detected then the facility is in violation of Reg. 7. The District can use the Regulation 7 requirements in conjunction with its Regulation 9 requirements specifically targeting refinery operations.

c. Criteria

NOVs shall be issued for all violations discovered during the complaint investigation. Complaint follow-up investigations shall be conducted when necessary and the follow-up shall be actively tracked. All complainants should be contacted and notified of the results of the complaint investigation unless they have specifically requested not to be notified.

d. Recommendations

None.



## **D. VARIANCE AND HEARING BOARD PROGRAM**

When an individual or company finds that they are violating a local district air pollution law and immediate compliance is not possible, the company or individual may be able to obtain a "variance." A variance provides the company or individual enforcement relief for a period of time necessary to fix the problem and come back into compliance with the rule.

When the need for a variance has been established, a source may file a petition for a variance with the local hearing board. After the noticing requirements are fulfilled, a hearing is held. There are numerous provisions in the Health and Safety Code relating to variance orders (sections 40820 - 40830, 40860 - 40865, 42301(g), 41702-41703, 42350 - 42372). One of these provisions requires specific findings to be made by the board at the hearing (42352). If these findings can be made, the variance must be granted. However, if they cannot be made, the variance must be denied. It is the hearing board's responsibility to evaluate all of the information provided to them at the hearing and decide whether to grant or deny the variance petition. In addition to Health and Safety Code (HSC) provisions, the open meeting requirements of the Brown Act also apply to local air district variance hearings. It is the hearing board's responsibility to ensure that all deliberations concerning the grant of a variance are done in an open forum.

Overall, the role of the District staff in this process is to provide consultation and technical expertise to both the hearing board and the petitioner, and to do the administrative processing of petitions and notices as required by the HSC. The HSC also delegates the responsibility of enforcing the variance to the District Air Pollution Control Officer [HSC 40752(c)].

The District's variance program was evaluated to determine its consistency with HSC requirements. To accomplish this, ARB staff reviewed District files and interviewed District staff.

The Hearing Board's written orders, decisions and procedures were evaluated to determine consistency with HSC provisions and open meeting requirements. To evaluate the Hearing Board program, ARB staff reviewed variance orders and listened to audio tapes of hearings. Approximately 175 variances were issued during the study period (December 1995 through January 1997). Thirty (30) case files, including 19 in which variance orders were granted, were reviewed. Of these 30 files, 11 contained short variance petitions, 10 regular, 6 emergency, 1 extension of a variance previously granted, 1 product variance, and one abatement order.



## A. GENERAL COMMENTS

Several areas of the Bay Area Variance Program are unique. An extension of a variance previously granted is applied for by letter, rather than petition. Summary disposition proceedings have been adopted where a petitioner does not have to be present at an extension hearing. If an emergency variance is applied for and denied, the petition that follows for regular or extension is "deemed filed" as of the date the emergency was denied, rather than the date the petition is received by the clerk's office.

Several areas of concern have arisen. Approximately 47% of the variance orders reviewed were granted retroactively. A retroactive order has an effective date which precedes the date it was granted by the board. In one case, the expiration date of the order preceded the date it was granted (3039S was granted on January 4, 1996 with a final compliance date of December 13, 1995). Retroactive variance orders make operating conditions and increments of progress schedules much less effective.

Interim variance petitions received by the district are not processed. Therefore, it appears that most sources operate with no limits while waiting the outcome of their hearing. Few of the orders granted by the hearing board contain interim operating conditions. Interim operating conditions place limits on the facility, equipment or process in order to reduce the amount of emissions coming from the source (reference HSC 42352(5) and 42353).

Many variances reach ARB late. The HSC requires the orders to be forwarded within 30 days. It sometimes takes several months for finalized written orders to be signed by the Hearing Board and sent to ARB.

A major area of concern is the private deliberations of Hearing Board findings and decisions. The "Brown Act" defines open meeting requirements. Variance hearings and the deliberations of the hearing board are subject to these requirements. The Board's practice of deliberating behind closed doors is contrary to the Act. However, recent ARB staff attendance at a BAAQMD variance hearing held on September 11, 1997, suggests that the hearing board has recently modified procedures and no longer adjourns to private quarters to discuss and vote on the granting of the variance. Therefore, while many variances granted during the study period were deliberated privately and in apparent contradiction with the Act, it appears that the District may have begun public deliberations at variance hearings.

Increments of progress and final compliance milestones are tracked by district staff using a computer database. On-site final compliance inspections are performed. All noticing requirements appear to have been met, and the clerk's files were in impeccable order.

## COMPLIANCE WITH HEALTH AND SAFETY CODE REQUIREMENTS

### a. Overall Findings

Evaluation of a representative sample of District variance documents and hearing board audio tapes for variances granted during the study period suggested that the following requirements were not always met:

- Brown Act: Open Meeting Requirements (b.)
- HSC 42352: Six Findings Shall be Made by the Board (c.)
- HSC 40862: Orders Shall Include the Reasons for the Decision (d.)
- HSC 42351: Interim Variances (e.)
- HSC 42353: HB Shall Prescribe Other Requirements (f.)
- HSC 42368: Increments of Progress (g.)
- HSC 42352: Staff Reports (h.)
- HSC 42360: Submittal of Hearing Board Decisions to ARB (I.)

The remainder of this section discusses specific findings and recommendations for program improvements regarding HSC provisions listed above. The subsection in which each requirement is discussed is noted above.

### b. Specific Finding, Brown Act Requirements

The BAAQMD Hearing Board's practice of adjourning to private quarters to discuss findings and decide whether to grant or deny a variance is in direct conflict with the requirements of the Brown Act. The BAAQMD's Hearing Board's practice of reviewing case files for upcoming hearings also violates Brown Act Requirements (reference BAAQMD agenda item "Hearing Board Conference"). This finding, while applicable to variances granted in the study period, appears to have already been addressed by the BAAQMD as noted in the comments above and explained in the discussion below.

#### Discussion

According to the publication prepared by the California Attorney General's Office entitled "The Brown Act, Open Meetings for Local Legislative Bodies" (1994), local air district hearing boards are not exempt from the requirement to hold all meetings in public. From page 29 of that publication:

"...this office concluded that the deliberations of a hearing board of an air pollution control district, after it has conducted a public hearing on a variance, order of abatement or permit appeal, must be conducted in public."

It has been determined that the Hearing Board, after holding a public hearing on the issue of a variance request, adjourned to private quarters to deliberate and act on the matter at hand. Therefore, the deliberations were not conducted in public as required by the Act.

However, ARB staff attended a hearing held on September 11, 1997. Two variance dockets were observed (3088 and 3185). At that hearing, the hearing board did not adjourn to private quarters and did conduct deliberations in an open public forum. It appears the BAAQMD Hearing Board has begun public deliberations.

The Act also defines meetings as follows (reference Section 54952.2 of the Government Code):

“Meeting includes any congregation of a majority of the members of a legislative body at the same time and place to hear, discuss or deliberate upon any matter which is under the subject matter jurisdiction agency.”

The term “legislative body” is not used in its technical sense in the Act (S54952). The Act’s application is not limited to boards and commissions insofar as they perform “legislative” functions. Actions which are primarily executive or quasi-judicial in nature are also covered.”

All variance hearing agendas obtained during the document gathering portion of the program review contained an item titled “Hearing Board Conference”. The agenda then lists topics to be addressed during the conference. One of the items on the list is “Review of Upcoming Variance Petitions.” Since this type of meeting falls under the definition listed above, conferencing of this type is also a violation of the Brown Act.

However, the most recent agendas received from the hearing board clerk’s office (reference agendas for August and September 1997 variance hearings) have deleted the item “Review of Upcoming Variance Petitions”. Therefore, it appears that the BAAQMD may have already recognized the inconsistency and addressed this item by removing it from the regular hearing board conference agenda.

#### Criteria

Comply with all provisions of State law concerning hearing board conference and deliberations.



## Recommendation

- o Full compliance with Brown Act open meeting requirements.
- o Refrain from discussing upcoming petitions at hearing board conferences.
- o It is recommended that Hearing Board and District Staff attend ARB's Variance Hearing Board Workshops.

### c. Specific Finding, Section 42352

No records of hearing board deliberations and decisions regarding the six findings required by HSC 42352 are available for ARB review. Therefore, it cannot be determined that the findings are being made by the hearing board. Findings required by HSC 42352 and 42365 are not included in all written orders granted by the BAAQMD Hearing Board.

## Discussion

The taped hearings of the BAAQMD Hearing Board contain only those portions of the hearing that are public. No discussion or mention of the six findings (reference HSC 42352 & 42365) is on recordings reviewed by ARB staff. Therefore, ARB staff cannot determine that the findings are being made by the Hearing Board. Also, findings and/or justifications for findings are missing from some variances granted during the study period:

<u>Docket #</u>	<u>Missing Finding Element(s)</u>
95-3039S	Justification 2A, 2B
96-3031R	Finding 1, Justification 1,2,3,5
96-3044PR	Finding 4, 5, Justification 4, 5 (Reference HSC 42365)
96-3046R	Finding 1
96-3049S	Justification 2B, 5
96-3059S	Finding 6, Justification 6
96-3095S	Finding 5, Justification 5
96-3111R	Finding 1,5,6, Justification 1,5
96-3127R	Finding 1,2A, 6, Justification 2A,5,6

Audio tapes of two hearings were reviewed by ARB staff (3019 Valley View Hospital, heard January 11, 1996 and 3105 E. I. DuPont, heard November 14, 1996). The portion of the hearing in which the Board makes the HSC 42352 findings and decides on the outcome of the request was not recorded. Therefore,

ARB could not make the determination that the required findings had been made by the Hearing Board.

#### Criteria

The district shall ensure that the requirements of the California Health and Safety Code Sections 40800-40865, 41702-3, 42301(g) and 42350-42373 is followed.

#### Recommendation

- o All deliberations of the hearing board should be tape recorded.
- o HSC six findings should be discussed and voted upon, one by one, on the record.

#### d. Specific Finding - HSC 40862 Orders Shall Contain Reasons for Hearing Board Decisions

Because there is no actual account of what the hearing board discussed in its closed door deliberations, ARB cannot determine that the language of the written order is an accurate account of the reasons for the decision. Written language regarding findings has been modified by source representatives during review of the order after the hearing.

#### Discussion

Because the deliberations were done in private with no record of the discussions(s) available on the hearing board tape, a finding that the order contains the Hearing Board's reasons for its decision cannot be made. In at least two instances (reference 3095S and 3105R), written variance orders have stated the Air Pollution Control Officer did not oppose the granting of the variance when, in fact, a response letter to the petition prepared by BAAQMD's Legal Office stating opposition to the variance is in the variance files.

A written order should reflect results of a variance hearing. However, in at least one instance (regular variance, E. I. DuPont, docket 3105), the order prepared after the hearing granting a variance does not appear to reflect the findings as made by the Hearing Board.

Order 3105 was sent to the source representative for review purposes. It was then sent back to BAAQMD with a letter stating that they had modified finding #6 (monitoring and quantifying of emissions from the source) because the source did

not have emission monitors on the process under variance. The emissions were calculated on the basis of various process parameters, so the source representative changed the finding to require that the source “determine” rather than “quantify” emission levels as requested by district staff. Review of the audio tape of that hearing found no mention of any findings so it is unclear where the original language for the findings came from; however, the modifications made by the source do suggest that the finding made by the hearing board was changed. The source modified the justification, after the fact, through written communications with District staff. Because of these changes and the lack of audio documentation of Hearing Board decisions, it appears that whoever is writing the variance makes the findings based on the circumstances and information available to them at the time. It is then sent to the Attorney at BAAQMD, to the source, and finally to the hearing board for review and signature.

At the very least, the closed door deliberations by the hearing board raises these issues:

How does the party preparing the order know the facts and reasons behind the HB decision regarding each finding so that it can be included in the written variance order? If the written findings are a true and accurate accounting of the findings and justifications and reasons for the decision which were made by the Board at the hearing, why are the justifications, findings and increments of progress schedules being modified before being sent to the hearing board for signature?

HSC 40862 specifies that the reasons for a hearing board decision must be included in the written order.

#### Criteria

The reasons for the decision and the facts the hearing board examined in reaching its decision to grant a variance will be in the written order.

#### Recommendation

- o All deliberations should be recorded so that a factual account of the reasons for the decision is available.
- o Preparation of order should come from the record of the hearing.
- o The hearing board findings contained in the written orders should reflect only what was found at the hearing.
- o Increments of progress should not be modified after the hearing has been held.



#### e. Specific Finding, HSC 42351 - Interim Variances

Of the 30 case files reviewed by ARB, nine contained requests for an interim variance. These petitions were never heard or withdrawn. No further action regarding interim petitions is contained in the District files.

#### Discussion

Out of the 30 files reviewed, nine contained requests for an interim variance (docket #s 3030S, 3031R, 3053R, 3059R, 3087S, 3091S, 3094, 3105R, 3127S). However, no further mention of these petitions or the outcome of the petition was included in the files. No interim variance hearings were held during the study period. No rules were found in the district files stating interim variances are not granted by the BAAQMD hearing board. The standard petition used by the District has an item that specifically asks if interim variance relief is being requested.

HSC 42350(a) states that “Any person may apply to the hearing board for a variance from Section 41701 or from the rules and regulations of the district.” HSC 42351(a) states “Any person who has submitted an application for a variance and who desires to continue operation pending the decision of the hearing board on the application, may submit an application for an interim variance.”

By ignoring interim variance petitions, the source is subject to penalties should their application for regular or short variance relief be denied, or if they come into compliance before the date of the noticed hearing. The opportunity for relief afforded under an interim variance granted until the outcome of the hearing is being denied by the District’s inaction regarding the interim requests. The source’s fundamental right allowed under HSC 42350(a) and 42351(a) is being denied.

Further, District rules allow the source to operate pending the hearing on their upcoming case without penalties. However, this also provides the source the opportunity to operate in violation of that particular rule with no operating conditions or other limits. If an interim variance is granted by the Board allowing them to operate until the outcome of their upcoming hearing, the District and the Hearing Board would then have the opportunity to place conditions on the source. The source would have to adhere to the conditions of the interim variance.

#### Criteria

The district shall ensure that the requirements of the California Health and Safety Code Sections 40800-40865, 41702-3, 42301(g) and 42350-42372 are followed.

## Recommendation

- o Interim variance petitions should be processed and heard by the hearing board.
- o Operating conditions, if appropriate, should be included in the interim variance orders.

### f. Specific Finding, HSC 42353 Prescribing “Other Requirements”

Seventy percent (70%) of the variances reviewed contained no requirements prescribed by the hearing board applicable to the equipment of the facility on variance.

## Discussion

Thirty case files were reviewed. Nineteen (19) of these files contained variances that were granted by the Hearing Board. The other 11 were either denied, dismissed or withdrawn. Ten (10) of the 19 granted should have contained some sort of operating conditions placed on the source (reference HSC 42353). Those ten variances included five (5) short, four (4) regular, and one (1) product variance. Only three (3) variances (96-3044 Product, 96-3046R and 96-3053R) contained conditions. Of the three that contained conditions, all were retroactive. Placing conditions on a source retroactively is ineffective, (47% of the variance orders that were granted were retroactive orders).

HSC 42353 states:

“Upon making the specific findings set forth in Section 42352, the hearing board *shall* prescribe requirements other than those imposed by statute or by any rule, regulation, or order of the district board, not more onerous, applicable to plants and equipment operated by specified industry or business or for specified activity, or to the operations of individual persons. However, no variance shall be granted if the operation, under the variance, will result in a violation of Section 41700" (emphasis added).

(HSC 42352 is the section that specifies the six findings that must be made before a variance can be granted, and 41700 is nuisance provision).

## Criteria

Variance conditions shall be specific and enforceable. Sources shall not be allowed to increase their production or alter their process in order to obtain a

competitive advantage over similar sources. Conditions shall always minimize excess emissions.

#### Recommendation

- o Reduce the frequency of retroactive orders by processing the interim variance petitions (see also finding e).
- o Prescribe conditions, after considering district staff recommendations, to reduce emissions from the source while on variance.

#### g. Specific Finding, HSC 42358(b) - Increments of Progress Schedules

At least one variance granted in calendar year 1996 that was granted for a period of more than one year did not include the required increments of progress schedule (reference docket #96-3111, regular variance granted to Inland Industrial).

#### Discussion

Docket #3111 had an effective date of August 22, 1996 and a final compliance date of November 30, 1997. This variance was effective for approximately 14 months. HSC 42358(b) states "A variance may be issued for a period exceeding one year if the variance includes a schedule of increments of progress specifying a final compliance date by which the emissions of air contaminants of a source for which the variance is granted will be brought into compliance with applicable emission standards." No schedule was included in the order.

#### Recommendation

- o Orders granting variance relief for a period exceeding one year must include an increments of progress schedule.

#### h. Specific Finding, Section 42352 & 42359.5 - Staff Reports

Staff reports are written for all variances over 30 days in length, however they lack many of ARB's recommended elements. The reports are not provided to the hearing board.

#### Discussion

The BAAQMD staff prepares a "Weekly Activity Report" that includes "Hearing Board Activities" and "Responses Due". This report itemizes each petition



with a summary of circumstances surrounding the variance request. The document basically takes the place of the typical staff report. Although weekly reports are prepared, they are not forwarded to the Hearing Board. Rather, they are routed to Legal Staff through the Deputy Air Pollution Control Officer and the Air Pollution Control Officer. These reports are used by the legal staff to prepare "Response Letters" which are forwarded to the Hearing Board. The response letter contains very general information on whether the district is opposed to the granting of the variance. Since the Weekly Activity Report contains much more information, it is recommended that they be sent to the Hearing Board members for review prior to the hearing.

The Weekly Activity Report was evaluated against ARB's "Criteria for Assessing District Enforcement and Permitting Program Adequacy" (criterion 8, page 20) and determined to lack the following elements :

- Criteria c): Ambient air quality near source
- Criteria f): Variance petition
- Criteria h): Effects on ambient air
- Criteria I): Demonstration that the variance will not affect the SIP nor maintenance of air quality standards
- Criteria j): Possible adverse health effects
- Criteria k): Variance history of the source
- Criteria m): Staff recommended restrictions, requirements, and conditions
- Criteria n): Increments Progress Schedules

#### Criteria

Staff reports shall be prepared for all variances over 30 days in length. Substantial details shall be included so that the hearing board can make a reasonable decision. The details shall include:

- a) Source background
- b) Process description
- c) Ambient air quality near the source
- d) Details of the problems causing the violation
- e) Rules being violated
- f) Actual variance application
- g) Excess emissions calculated by the District
- h) Effects on the ambient air
- I) Demonstration that the granting of the variance will not affect the SIP nor the maintenance of air quality standards
- j) Possible adverse health affects
- k) Variance history of the source

- l) Cost benefit analysis (BACT only)

#### Recommendation

- o Include in the weekly reports the information recommended in ARB's evaluation criteria specified in Finding h. (above)
- o Provide these reports directly to the Hearing Board.

### I. Specific Finding, Section 42360

Approximately 15 of the 30 decisions reviewed were not forwarded to ARB within the 30 day time period required by HSC 42360.

#### Discussion

ARB staff review of ARB records in Sacramento revealed that 15 of the decisions made were not sent to the ARB within the 30-day time limit specified in HSC Section 42360. There seems to be a long time period between the time the order is granted and the time it is signed by the hearing board (reference docket #'s 3036S, 3105R, and 3127R). In the case of 3036S, the order was dismissed by the hearing board on February 1, 1996 but not signed until November 18, 1996. Case #3127R was heard and granted on November 14, 1996 and signed on February 6, 1997. Docket # 3105 was heard on December 19, 1996 (effective date 7-19-96 making it a retroactive variance) and signed on February 27, 1997. Procedures may need revision so that orders are signed and sent to ARB in a more timely manner.

Section 42360 requires that the APCO or the hearing board submit to the state board, within 30 days from the date of decision, all orders granting, modifying or affecting a variance issued by the hearing board.

#### Criteria

The district shall ensure that the requirements of the California Health and Safety Code Sections 40800-40865, 41702-3, 42301(g) and 42350-42372 are met.

#### Recommendation

- o Develop a procedure for submittal of variances to ARB that ensures ARB receives variances within the 30 day time limit specified by HSC Section 42360.

## E. SOURCE TESTING PROGRAM

Source testing, i.e., quantifying emissions from a selected point in a process or control device, is often the only way to verify compliance with permitted pollutant limits. Source testing is also the way to confirm the accuracy of a Continuous Emission Monitor (CEM). Source testing verifies that equipment can operate in a normal representative mode while complying with its permitted emission limits throughout the year.

To generate the information necessary to do this, Compliance Division staff interviewed District staff and reviewed 28 source test documents, including the District's Source Test Policy and Procedures, Compliance Data System (CDS) List, Source Test Log (174 Source Tests were conducted in 1996), Source Test Reports and Permits to Operate.

### A. GENERAL COMMENTS

The District's source testing program is operating in an overall satisfactory manner. However, the program does not require annual testing of *all* permitted units at major sources. The District tests permitted units at major sources and the frequency depends upon the size of the plant, number of permitted units and permit condition requirements. The District conducts its own source tests and complies with most of the requirements specified by the ARB's criteria for an adequate source testing program.

The District has a mechanism for tracking current source tests. No mechanism exists for tracking required future source tests. Source test data and reports are easy to retrieve from the District's filing system.

The District has written policies and procedures for conducting source tests but no policy about the administration of the source test program and any subsequent enforcement action for sources which fail a source test.

### B. SOURCE TESTING OF MAJOR/MINOR SOURCES

#### a. Findings

The District's source testing program does not require annual testing of *all* permitted units at major sources. Permit units at major sources are tested based upon engineering evaluations, permit conditions and at the request of the District's legal, enforcement and permit divisions.



b. Discussion

The District's Source Test Policy and Procedure does not require annual source testing of *all* permitted units at major sources. Major sources are source tested if required by engineering evaluation, permit condition or at the request of the District's legal, enforcement or permit divisions. The frequency of source testing is dependent on the size of the plant, number of sources and permit condition requirements.

The table below shows the results of the permit condition (pc) file review for a few selected sources:

SOURCE TEST PERMIT CONDITIONS & TEST FREQUENCY			
Facility (ID #) Source (ID #)	Frequency of Source Tests by Permit Condition	Last Source Test	Pollutants Tested
Chevron (10) FCCU (S-4285)	Depends on previous test results	9/17/96	Particulate
	4x/year	3/22/96 / 4/15/96 7/22/96 / 10/23/96	Particulate
Crockett (8664) Aux Boiler B (S-204)	Annual	12/6-8/95 (start-up)	CO/NO <sub>x</sub> /POC/NH <sub>3</sub> PM <sub>10</sub>
GWF Power (3224) Combustor (S-1)	Start-up	4/23-30/90 (start-up)	Particulate/PM <sub>10</sub> /NO <sub>x</sub> CO/O <sub>2</sub> /CO <sub>2</sub> /SO <sub>x</sub> /PAH Metals
		6/4 & 6/9/90 (start-up)	Total HC/Ammonia
IES (1996) Incinerator (S-4)	Start-up	6/28-29/94 & 7/19/94 5/17/95	Dioxin Particulate/HCL
Owens-Brockway (30) Furnace D Stack (S-11)	Omitted	7/19/96	Lead/CO
Shell Oil (11) CO Boiler 1 (1507)	Start-up	7/15/94	Particulate
Tosco Corp (13) Boiler No. 6 (S-904)	Omitted	9/23/93	Particulate

In two cases, i.e. Owens-Brockway and Tosco Corporation, source testing requirements were not included as permit conditions on the permit to operate.

Major sources are tested by independent contractors upon start-up; however, any required future tests are determined on a case by case basis for each source. The vapor recovery units at bulk distribution terminals are tested twice per year. Particulate and metal sources are tested annually or every few years. Volatile organic compound and gaseous sources are tested whenever the District's enforcement, permitting or legal staff request it.

c. Criteria

The district's source testing program shall require the annual testing of permitted units at major sources (actual 25 or potential of > 100 tons/year) or where the only means of compliance verification is through source testing. Minor sources whose compliance can only be determined by a source test shall have a start-up source test followed by periodic source testing at an interval determined by the APCO.

d. Recommendations

- o The District's permits to operate should include permit conditions that specify the frequency of source testing for *all* permitted units at major sources. Permits should be updated with these conditions upon the annual enforceability review required by Health and Safety Code Section 42301(e).
- o The District should have a means of verifying that *all* permitted units at major sources are tested according to the frequency established for each permitted unit. The District should consider utilizing independent contractors as a means to increase compliance assurance.

B. DISTRICT SOURCE TESTING PROGRAM

a. Findings

The District has the technical capability and equipment necessary to conduct its own source tests. The District's source test program complies with most of the requirements specified by the ARB criteria for an adequate District source testing program. The District's source test program is operating in an overall satisfactory manner.

## b. Discussion

The District's source testing program consists of the following elements:

- a) Source test personnel are skilled and knowledgeable about source test procedures. Source test personnel conducted 174 source tests in 1996.
- b) Proper source test equipment is utilized.
- c) Source test equipment is maintained including calibration gas audits every six months and test instruments calibrated on a yearly basis.
- d) District test methods are as stringent as ARB methods.
- e) Source tests are unannounced 75 % of the time.
- f) Source test reports are completed in a timely manner.
- g) Appropriate legal action is taken for source test violations. When a source fails a source test, Technical Services Division sends a memorandum to the Enforcement Division which prepares a VN which is then hand delivered to the source by the field inspector. Of the 174 source tests conducted by the District in 1996, twenty-two resulted in VNs. We reviewed sixteen of these VNs and found that the average penalty settlement to be \$ 945.
- h) The District conducts follow-up source tests within 30 days after a source is documented to be in noncompliance.

The District's source test reports can be improved by providing a title page and introduction and by consistently attaching copies of the permits to operate and emission calculations. Providing emission calculations is important in assuring quick review of the results necessary for legal action taken.

The ARB Source Test Section also conducted eleven source tests within the District during the program evaluation and found all sources to be in compliance. More information about these tests is contained in Appendix B-2-9.

## c. Criteria

If the district performs or has the capability of performing its own source testing, then it shall meet quality standards including having skilled personnel and proper equipment. It shall also conduct unannounced source tests and follow-up



source tests for sources in violation and take appropriate legal action for violations.

d. Recommendation

- o The District can improve its source test reports by including a title page, introduction, copies of the permits to operate and emission calculations.

D. TRACKING MECHANISM FOR SOURCE TESTS

a. Finding

The District maintains a source test log for tracking current source tests but no mechanism for tracking required future source tests.

b. Discussion

The District maintains a source test log that is legible and readily accessible. A source test number is assigned to each source test and this number is included on the source test report and on subsequent correspondence. The District can also print out a list of sources where Field Accuracy Tests (FATs) have been conducted. These tests are conducted to ensure the accuracy of CEMs. The list provides a retest date that looks forward to the next scheduled FAT. According to staff, recent changes to the District's Ingres database should enable the District to track future required source tests.

According to the Chief of the Source Test Section, the District's Source Test Section conducts 700 tests per year (source tests, FATs and cargo tank pressure decay tests) utilizing four two person teams. CEMs and the vapor recovery units at the bulk distribution terminals are tested twice per year on a scheduled basis. However, the majority of the source tests are conducted upon request from the District's enforcement, permitting and legal divisions. Since the Source Test Section is kept busy full time, they do not schedule annual tests at major sources so the necessity of tracking future required source tests has not been an issue. A tracking mechanism would aid the District in determining what permit units at major sources need to be source tested and whether or not the District will be able to conduct the test.

c. Criteria

The district should have a tracking mechanism that allows the district to track past and future source tests. Such a tracking mechanism would aid the district in

determining whether all major sources in the district are being tested on an annual basis.

d. Recommendation

- o The District should develop a tracking mechanism, i.e., computer data base with tickler file, which tracks future source tests.

E. FILING SYSTEM AND DOCUMENT RETRIEVAL

a. Finding

The District's filing system allows for easy retrieval of source test data and reports.

b. Discussion

The District has an alpha numeric filing system that allows for easy retrieval of source test data and reports. Users of the filing system check out files with out-cards and replace the files when they are finished reviewing them.

c. Criteria

The district should have a filing system that allows for the easy retrieval of source test data and reports.

d. Recommendation

None.

F. POLICIES AND PROCEDURES

a. Findings

The District has written policies and procedures for conducting source tests but no policy about the administration of the source test program and subsequent enforcement action.

b. Discussion

Volume IV of the Manual of Procedures is a manual of the District's source

test procedures for conducting source tests. The manual is an outstanding document that clearly defines the District's test methods.

The District has no formal written policies describing the District's administration of its source test program and subsequent enforcement action for sources which fail a source test. A written policy is needed to formalize the District's administrative procedures and describe the policies of the District with respect to subsequent enforcement action should a source fail its source test.

It should be noted that to our knowledge, no district has a formal written policy describing the administration of their source test program and subsequent enforcement action. A policy could be developed in cooperation with enforcement/engineering managers in other districts.

c. Criteria

The district should have written documents and policies that describe the policy of the district about source testing and subsequent enforcement action.

d. Recommendation

- o The District should develop written policies which outline their actions about source testing and any subsequent enforcement action.





## **F. CONTINUOUS EMISSION MONITOR PROGRAM**

A comprehensive and efficient continuous emission monitor (CEM) program is an effective tool for compliance verification and very beneficial to any district's enforcement and inspection program. CEMs allow a district to verify a source's daily compliance status on a continuous basis through the review of hourly data on a source's CEM reports. The accuracy of CEMs is verified by parallel source tests of the CEM-equipped units.

The District's CEM program was evaluated for compliance with ARB's CEM program criteria. To evaluate the District's CEM program, ARB staff interviewed District staff and reviewed 385 CEM-related documents including: Authorities to Construct and Permits to Operate, Daily and Monthly CEM Reports, Episode Report Forms, Field Inspection Reports, CEM Data Evaluations, Violation Notices (VN's) and Field Accuracy Tests (FATs).

### **A. GENERAL COMMENTS**

There are 116 units with CEMs at thirty-six different sources within the District. The District enforces its CEM requirements at these sources through its policies, procedures, regulations, emission limits and permit conditions, although CEM requirements are not always included as permit conditions when they are needed. CEMs at oil refineries are inspected weekly and those at other industrial facilities are inspected three times per year. Enforcement action is not consistently taken when a Monthly CEM Report is late.

The District verifies the accuracy of CEM data semiannually through FATS conducted by the District's Source Test Section. The District has required the installation of CEMs when there has been a history of noncompliance.

Facility operators report CEM excess emissions to the District within the required 96 hours of their occurrence. The District reports these excesses to ARB within five working days as required by state law.

### **B. ENFORCING CEM REQUIREMENTS**

#### **a. Finding**

There are 116 units equipped with CEMs at thirty-six different sources within the District. The District enforces its CEM requirements at these sources through its policies, procedures, CEM regulations, emission limits, and permit conditions.

b. Discussion

The District's CEM list, dated February 18, 1997, shows 116 units with CEMs operating at thirty-six sources within the District. Volume V of the District's Manual of Procedures (MOP) elaborates upon the CEM requirements contained in Regulations (1-520 through 1-522). Volume V sets forth the applicability, instrumentation, installation, operation, testing, recordkeeping, and reporting requirements for CEMs.

District regulations specify emission limits, calibration, and reporting requirements. However, these requirements are not always incorporated as permit conditions. The table below shows the results of the permit condition (pc) file review for a few selected sources:

<b>EMISSION LIMITS/CALIBRATION &amp; REPORTING REQUIREMENTS</b>			
<b>Facility (ID #) Source (ID #)</b>	<b>Emission Limits (pc #)</b>	<b>Calibration Requirement (pc # / frequency)</b>	<b>Reporting Requirement (pc # / frequency)</b>
Chevron (10) FCCU (4285)	4, 5 & 6	omitted	omitted
Crockett Cogen (8664) Auxiliary Boiler B (204)	23, 24 & 27	30 / prior to start-up	40 / 96 hours
GWF Power (3244) Combustor (1)	9, 10, 21	30a / not specified	73 / monthly 75 / 96 hours
IES (1996) Incinerator (4)	omitted	omitted	omitted
Owens Brockway (30) Furnace D (11)	omitted	omitted	omitted
Shell Oil (11) CO Boiler 1 (1507)	2	omitted	omitted
Tosco (13) Boiler 6 (904)	omitted	omitted	omitted

With respect to enforcing CEM requirements, a review of the same sources shows that the District takes enforcement action and collects penalties when a source exceeds its emission limits. A review of VNs issued in 1996 shows that VNs were issued to Huntway Refinery, OLS Energy-Agnews and Jefferson Smurfit Corporation for failure to submit a monthly CEM Report (1-522.8). However, no enforcement action was taken when Crockett Cogeneration and Owens-Brockway submitted their Monthly CEM Reports late although enforcement action was taken for related



emissions violations.

The table below shows enforcement action for selected source CEMs:

<b>CEM ENFORCEMENT ACTIONS</b>				
<b>CEM Report (Month/Year)</b>	<b>On Time?</b>	<b>Limit Exceeded (Date)</b>	<b>VN #</b>	<b>Penalty Settlement Amount</b>
Chevron (3/96)	Yes	Opacity (3/3/96)	30036	\$ 797
Crockett (1/96)	<b>No (3/27/96)</b>	NOx (1/11/96)	28445	\$ 100,000
		NOx (1/22/96)	28446	\$ 50,000
		NOx (1/23/96)	28446	
GWF Power (4/96)	Yes	SO2 (4/4/96)	29551	\$ 692
IES (2/96)	Yes	Opacity (2/1- 2/29/96)	29445	\$ 3,500
Owens-Brockway (4/96)	<b>No (6/12/96)</b>	Opacity (4/28/96)	29559	\$ 1,000
Shell Oil (2/96)	Yes	Opacity (2/1/96)	29430	\$ 493
Tosco (1/96)	Yes	None	NA	NA

c. Criteria

The district shall enforce its CEM requirements. These requirements shall include: a) some reports of emission levels on a regular basis (monthly, quarterly), b) calibration requirements of the CEM unit which includes daily calibration checks (at zero and span gas levels) of CEMs per the requirements of Section 60.13 of the Code of Federal Regulations and c) emission limits as established by the CEM rule or by the source's or the CEM's permit to operate.

d. Recommendations

- o Emission limits, calibration, and reporting requirements should be included as permit conditions for all CEM-equipped units.
- o The District should consistently enforce Regulation 1-522.8 by issuing VNs when Monthly CEM Reports are late.

## C. QUARTERLY INSPECTIONS OF CEM SOURCES

### a. Findings

The District inspects CEMs at oil refineries weekly and at other industrial facilities three times per year (including two field accuracy tests) to verify that the CEM is operating, operating properly, and that calibration of the CEM is occurring regularly.

### b. Discussion

According to one of the District's Enforcement Supervisors, CEMs at oil refineries are inspected weekly. CEMs at other industrial facilities are inspected during the facilities' annual compliance inspection and as a result of a complaint investigation. The technical services staff also inspects CEMs twice a year during their Field Accuracy Tests. A review of 40 annual compliance inspection reports from 1996 was insufficient to determine if the District's enforcement staff is inspecting CEMs because the CEM inspection is rarely documented. CEMs at oil refineries are inspected weekly (because of their high potential for excess emissions) but the CEM inspection is only documented if a problem is found.

### c. Criteria

The district shall inspect sources with CEMs, on at least a quarterly basis, to verify that the CEM is operating, operating properly, and that calibration of the unit is occurring regularly.

### d. Recommendation

- o The District's enforcement staff should document their inspections of CEMs in order to show that they are being inspected.

## D. CEM DATA ACCURACY VERIFICATION

### a. Finding

The District verifies the accuracy of CEM data semiannually by conducting parallel source tests (Field Accuracy Tests) of CEM units.

### b. Discussion

The District's Source Test Section conducts semiannual Field Accuracy Tests

on all CEMs (other than opacity monitors) to assure their proper maintenance and accuracy. The District may request a facility to conduct a performance audit of an opacity monitoring system to verify its calibration and a District representative will be present to observe the audit. For those sources in compliance, the District may not retest the CEM for nine months. Sources in violation are issued a Violation Notice (VN) and are retested three months later.

c. Criteria

The district shall verify the accuracy of CEM data at least once annually using parallel source testing.

d. Recommendation

None.

E. REQUIRING A CONTINUOUS EMISSION MONITOR

a. Finding

The District has required the installation of CEMs due to a history of noncompliance.

b. Discussion

The District will consider requiring a source to install a CEM if they issue more than two VNs to that source. As an example, the District required Integrated Environmental Systems (IES) to install additional CEMs on their new incinerators (S5 & S6) because of an enforcement action taken by the District due to many violations of Regulation 6-302 (Opacity). These violations occurred during the operation of this company's old incinerators (S3 & S4). The District also required Owens-Brockway to install an opacity monitor on their Glass Melter Furnaces because of an enforcement action taken by the District due to violations of Regulation 6-302 (Opacity).

c. Criteria

The district shall consider requiring CEMs at sources where:

- a) there is a history of noncompliance
- b) the source's emission levels are close to the New Source Review or Best Available Control Technology trigger level for that district.



d. Recommendation

None.

F. HEALTH AND SAFETY CODE SECTION 42706

a. Finding

Facility operators report CEM excess emissions to the District within the required 96 hours of their occurrence. The District then reports these excess emissions to ARB within the required five working days after receiving these reports from facility operators.

b. Discussion

A review of 335 Episode Report Forms submitted to the District in 1996, revealed that facility operators submit excess emissions reports to the District within 96 hours of their occurrence. The sole exception to this occurred during the first quarter of 1996 when Crockett Cogeneration failed to report their CEM excess emissions. As a result, Crockett Cogeneration was issued VN # 28445 and 28446. Conditional Order for Abatement No. 3076, issued by the District's Hearing Board on June 6, 1996, subsequently addressed the underlying emissions violations and required the facility to report excess emissions on time.

The District reports CEM excess emissions to ARB within the required five working days after receiving these reports from facility operators.

c. Criteria

The district shall comply with Health and Safety Code Section 42706, which requires that:

- a) emission violations, showed by monitoring equipment, must be reported by the source to the district within 96 hours of occurrence,
- b) emission violations (even if caused by a breakdown) be reported to the ARB within five working days after receiving the report from the source.

d. Recommendation

None.

## G. AGRICULTURAL & OPEN BURNING

Open burning can be a significant source of criteria pollutant and toxic emissions, whether from legally sanctioned agricultural burning, flood debris burning, or wildland burning for fire prevention and land management.

Smoke emissions contribute measurably to pollutant concentrations in ambient air, causing problems such as reduction of visibility, disturbance of personal comfort, aggravation of respiratory problems, and exceedances of health-based air quality standards. In addition, smoke emissions from open burning often compound the burden on regulatory compliance staff by causing both public and private nuisance complaints.

Until alternatives are established and implemented, there remains a need to conduct large scale burning for certain agricultural crops and other land management practices. Air currents do not recognize geographical boundaries, and certain meteorological conditions and land topography can reduce the rate at which air pollutants dilute and disperse. This often prolongs the intensity and duration of pollutant exposure to a given population. Thus, ensuring healthful air quality statewide and within individual air basins requires an organized and coordinated system that includes regulating, monitoring, recording, and verifying frequencies and quantities of large scale open burns.

The District's agricultural burning program was evaluated for consistency with the requirements of the California Code of Regulations (CCR), California Health and Safety Code (CH&SC), and ARB's evaluation criteria document. Documents reviewed for this evaluation included violation case files, public information handouts, burn permits, various forms and correspondence.

### A. GENERAL COMMENTS

The BAAQMD is made up of nine counties, with varying topographies and localized air quality issues. Coordination and cooperation within the District as well as local control are of notable importance. The burning programs in each area must be tailored to protecting the air quality of both the metropolitan areas and the adjoining rural and residential areas.

The original District Open Burning regulation was enacted in 1957, and was grandfathered into the State SIP when the Agricultural Burning Guidelines were promulgated into Title 17 of the California Administrative Code (now the California Code of Regulations) in 1972. The District, therefore, was not required to adopt new rules in accordance with the Guidelines at that time.

## B. ENFORCEMENT

### a. Findings

The District regulation is consistent with the requirements of Title 17, the California Health & Safety Code, and the ARB's evaluation criteria document, with a few exceptions, such as allowing flood debris and flood control burning, not requiring the reporting of the type and amounts of agricultural waste burned, and allowing film making burns on a no burn day. The District regulation is more restrictive than State law in that it prohibits both land development burning and residential burning.

Most violations of Regulation 5 are committed by individuals, not businesses or agricultural operations. A total of 43 violation notices (VNs) were issued by the District for Reg 5 violations in 1996; the vast majority were for igniting or allowing a fire which is not listed in the regulation as allowable.

All District field staff serve as lookouts for open burning surveillance as part of their daily activities, and they also investigate the open burning complaints. After-hours and weekend surveillance are provided informally by the fire agencies, at least the response to reported fires.

### b. Discussion

The Open Burning Regulation, Regulation 5, includes both nonagricultural and agricultural burning. Definitions for "agricultural fire," "fire," and other terms used in the regulation are listed at the front. The terms defined are not alphabetized, but are mostly in the order in which the rule sections were adopted.

Open burning in the Bay Area is allowed only on burn days, with very few exceptions. Examples of exceptions are a wildland vegetation management burn, if given a positive 48-hour weather forecast, and a filmmaking fire, if approved by the APCO in writing at least 10 days prior to the burn.

District meteorologists determine the burn/no-burn day status daily for the District. They also issue the 72-hour outlooks and 48-hour forecast decisions for the prescribed burns which have prior District approval. In 1996 the District issued forecasts for 23 proposed burns, 11 of which were conducted.

Open burning by businesses is not allowed, with the exception of industrial fire training and film making. The rule allowing the open burning of waste propellants, explosives and pyrotechnics expired on January 1, 1997.



A total of 43 VNs were issued by the District for Reg 5 violations in calendar year 1996; 40 were for violation of section 5-301.1, for igniting or allowing a fire which is not listed in the regulation as allowable. The District penalty fee schedule for Regulation 5 violations is as follows:

5-301 Prohibition of Fires .... \$125

5-301.1 No Igniting or Allowing Fires, Except as Provided .... \$400

5-301.2 No Burning on a No Burn Day .... \$200

Of the five legal actions reviewed, one incident occurred before the review period, although the District VN was issued (as a follow-up to a CDF incident report) within the review period. The penalty imposed was \$125. One VN was settled without penalty; although the District had imposed a penalty of \$400, the CDF office had been contacted by the rancher prior to the burn, the material burned would have been legal if he had obtained a permit, and he burned on a burn day. CDF staff told him that he should not have to pay any penalty and to go to court first. The District decided to go NFA (no further action) on the case.

Three cases were settled for the full amount requested; two for burning illegal materials, one for burning outside the allowed burn period. The latter, an agricultural service operation, had a violation the year before (of a different nature); the owner took full responsibility for the independent actions of a new employee, and paid the District the base fine of \$400 plus \$129 for the past history.

Most violations of Regulation 5 are committed by individuals, not businesses or agricultural operations. The District has an informative pamphlet for the public, "Open Burning Information," which summarizes the types of fires allowed, whether prior air district notification is required, the months each type of burning is allowed, burn and no burn day information, District phone numbers, etc. Noted on the front of the pamphlet is the fact that the burning of leaves, garden prunings, grass cuttings, and trash is prohibited by law.

Some fire stations report violations of open burning rules to the District, and others do not. If the District is notified of a violation, District staff will use the fire station's "run report" as documentation for the violation in issuing a violation notice.

All District field staff serve as lookouts for open burning surveillance as part of their daily activities, and they also investigate the open burning complaints originating in their areas. After-hours and weekend surveillance are conducted periodically on an as-needed basis, particularly during the burn season.

The District has a policies and procedures manual on open burning, which gives inspection guidelines for determining the fire type, reviewing the burn permit,

complaint investigation, allowable fires, emergency waivers, and those fires requiring prior notification.

c. Criteria

The district's agricultural burning program shall be consistent with the California Health and Safety Code, Division 26, Part 4, Chapter 3, Article 4, and the California Code of Regulations, Title 17, Division 3, Chapter 1, Subchapter 2. The district shall actively enforce the agricultural burning regulations including surveillance during and after normal working hours. The district and/or its agent shall issue notices of violation or notices to appear for all agricultural burning violations discovered by district or designated agency staff.

d. Recommendation

See C (d).

C. PERMITTING/EMISSIONS TRACKING

a. Findings

The District does not issue burn permits, or charge a fee for any type of open burning. Over one hundred fire stations (129 are on the mailing list) issue the burn permits in the District. There are no formal MOUs between the District and the fire stations; this is simply a time-honored practice, except in northern Napa and Sonoma counties where the District has an MOU with the CDF unit concerning the prescribed burns in their area.

The Special Burn permits that require prior written APCO approval and are to be requested ten days before the burn in the form of a letter or fax, are the filmmaking, public exhibition, and the fire training burns on a no burn day. The one filmmaking request reviewed was requested two days before the burn by fax, with an apology for not knowing about the ten-day lead time. The District granted the permit in the form of a letter.

Emergency Waivers are granted by the District fire agencies. These are disease and pest prevention, hazardous material, and Wildland Vegetation Management burns where the conditions stipulated in the regulation, such as drying times, burn hours, etc. are waived because it is deemed "necessary for public safety" by the fire official. The waivers must be reported to the District within ten days. None were issued in 1996.

The District regulates the daily amounts of open burning in the three areas where large amounts of burning have generated public complaints in the past: field crop stubble burning, marsh/tule burning, and prescribed burning.

#### b. Discussion

The District maintains a mailing list of the fire stations and other interested agencies (farm advisors, agricultural commissioners, farm bureau, UC cooperative extensions) for sending out advisories, updates, etc. Many of the fire stations send copies of the burn permits they issue to the District, which files them but does not process them. Perusal of the permits on file showed a wide range of vegetative materials being burned.

The District provides the fire stations with the District Regulation 5 Open Burning “notification” triplicate form. It includes areas to record applicant and burn site information, authorization confirmation, and emergency waivers. It lists the types of allowable fires, and, on the back, gives several key definitions and the burn periods, the authority source and the prior notification requirements for the allowable fires. This form is used by a number of the fire stations as a burn permit. Some stations have their own permit, modeled after the District form, or are using an older District form (disease and pest prevention, 1983) or the CDF LE-5 inter-agency burn permit. All permit forms reviewed state that burning is allowed only on burn days.

District Regulation 5 was amended in 1994 to include daily acreage limitations in order to control excessive smoke and odor emissions from burning field stubble and marsh or tule fires. At that time three additional allowable fire types were added to the regulation: Wildland Vegetation Management, Filmmaking, and Public Exhibition. Other amendments were made to improve the enforceability and clarity of the regulation, and to address certain other open burning issues.

The District regulates the daily amounts of open burning in the three areas where large amounts of burning have generated public complaints in the past: field crop stubble burning, marsh/tule burning, and prescribed burning. Farmers seeking acreage allocations for burning field crop stubble call the District burn staff person directly; the daily number of these burns is limited, mainly in Napa and Sonoma counties. Solano County dispatch allots limited acreage for marsh/tule burns daily, and keeps a log on the amounts and the locations burned. Four complaints were received on September 21 concerning burning on Grizzly Island.

It appears from the complaint data that the few instances of multiple complaints received on a single day, regarding smoke from an open burn, concerned prescribed burns. A controlled burn conducted in Annadel State Park in Santa Rosa was the subject of three public complaints on September 15; the burn escaped and



was ultimately contained in seven days, the last two of which were no-burn days. Six more complaints were received concerning that burn on September 20, and one each on the 21st and 22nd. A controlled burn near Sears Point in Sonoma generated eight complaints on September 23. In northern Napa and Sonoma counties, the District has an MOU with the CDF unit concerning the prescribed burns in their area.

c. Criteria

If the district has ARB designated agencies, then there shall be signed memoranda of understanding or agreements between the agencies defining each agency's responsibility in permit issuance, fee collection, enforcement, violation processing, and reporting requirements for permits issued. These memoranda shall be updated periodically. Also, the district shall periodically monitor the designated agency's performance.

The district shall be the agency which issues the special burn permits for burning on no burn days. The district shall carefully evaluate the issuance of these permits to ensure that daily acreage burned is limited and that no burning takes place if downwind metropolitan areas are forecast to exceed the ambient air quality standards. Also, the district shall define "imminent and substantial economic loss" and determine how many no burn days (or refusals for permission to burn) in a row the applicant must wait before being issued a permit to burn on a no burn day.

The district shall ensure that it or its designated agency obtains information on the amount (acreage) of agricultural burning to occur each day so that the district or the designated agency can regulate the total amount of agricultural burning to be allowed each day. A limit shall be set on the acreage to be burned each day. The district shall ensure that all burn permits are issued with conditions that require abatement of burning which creates a public nuisance. Guidelines shall exist to prevent burning from creating a public nuisance (e.g., population density criteria, upwind of populated areas, etc.).

d. Recommendations

- o The District should seek to establish MOUs with all of the fire stations designated to issue burn permits. In developing the MOU(s) with the fire stations, the District should encourage their formal, active participation in District surveillance and enforcement procedures related to open burning.
- o The District should establish MOUs with the land management agencies in the District which conduct wildland burning.

- o The District and the agencies conducting prescribed burning should work together to increase the public awareness of this type of burning, developing and distributing information packets, flyers, and media notices well in advance in any nearby smoke sensitive areas prior to a scheduled burn.
- o The District should also develop a prescribed burn review process with the land management agencies to study the positive and negative results of the burns completed: the success of the prescription, the smoke management, the public reaction, etc.





## **H. DATA MANAGEMENT PROGRAM**

An effective data management program ensures that a district has ready access to important data in its filing system. Retrieval of file information is important to processing a permit, researching enforcement actions and complaints against a source, finding out when the next source test is required and enabling management to make decisions about their programs.

### **A. GENERAL COMMENTS**

In calendar year 1996, the District conducted over 16,000 inspections and 174 source tests. The District received 180 breakdown reports, 309 Continuous Emission Monitor (CEM) episode reports, 5,064 complaints and issued 1,401 Violation Notices (VNs). The District issued 522 applications for authority to construct and 841 permits to operate. The District maintains computer data logs for these categories and keeps hard data (reports, correspondence, etc.) in Division files.

Although the District does not have separate written data management procedures and guidelines, data management procedures are contained within the Manual of Procedures (MOP), Permit Handbook and Enforcement Division Policies and Procedures enabling the District to carry out an effective data management program. The District maintains internal quality control and procedures governing its filing system. The filing system allows for expeditious retrieval of information.

District staff have access to a main computer as well as individual personal computers that are networked. The main computer contains various enforcement and permitting related custom designed databases linked together by different tables and certain common data fields. Staff also communicate, share documents and receive guidance from management through their electronic mail system. The District has a good data management system considering the number of facilities (7,662) and permitted sources (approximately 27,000) within the District. They have designed their own databases and permitting and enforcement related forms that allow them to process data in a consistent and efficient manner.

The District has a computer database tracking system internal to its Local Area Network System (LANS). All Permit Services Division staff are connected to this system and all Enforcement Division staff are expected to be connected to this system by November 1997. The District tracks permitting and enforcement activities on a real-time basis for all permitted sources and maintains a system for tracking complaints, breakdowns, VNs and Notices To Comply (NTC). The District does not have a system for tracking future source tests, i.e., a tickler file.

## B. PROCEDURES AND GUIDELINES

### a. Findings

The District has data management procedures contained in the MOP, Permit Handbook and Enforcement Division Policies and Procedures allowing them to carry out an effective data management program. The District's filing system allows for expeditious retrieval of information.

### b. Discussion

The District has a number of program policy and procedure documents. Besides covering program information, these documents also provide guidance on the collection, retention and use of data integral to the successful management of the District's programs.

The MOP gives technical assistance and guidance to persons subject to the rules and regulations of the District. The MOP contains data management procedures for enforcement, engineering, laboratory, source testing, CEMs, air monitoring and guidelines for environmental processes under the California Environmental Quality Act (CEQA).

The Permit Handbook is a user friendly guide for those applying for authority to construct or permit to operate. The Handbook has data management procedures necessary for processing a permit to operate.

The District developed the Enforcement Division Policies and Procedures Manual to provide guidance to District Enforcement staff in the performance of their duties. The procedures set forth in this manual are primarily inspection procedures followed by District inspectors and contain data management procedures associated with this function.

The District does not have consolidated written guidelines that describe how information is collected, transferred, filed and accessed. It also does not have written guidelines, specifically identified as data management guidelines, describing how the District tracks permitting and enforcement activities. It also lacks written internal quality control and security procedures governing its filing system.

The District's hard copy filing system allows for expeditious retrieval of information. The Permit Services Division maintains current permit files on the third floor. Permit files older than six months are available on microfiche. The Enforcement Division maintains current source files on the second floor. Source files older than six months are microfiched or scanned using an optical imaging

system and stored on a computer disc.

c. Criteria

The district shall develop procedures and guidelines to implement an effective data management program which would assist the district in its goal of implementing an effective control program. The file shall allow for expeditious retrieval of information.

d. Recommendation

- o The District should consider augmenting its policies and procedures with consolidated written guidelines that describe how information is collected, transferred, filed and accessed. Written guidelines could also describe how the District tracks permitting and enforcement activities and its internal quality control and security procedures governing its filing system.

C. TRACKING SYSTEM

a. Finding

The District tracks permitting and enforcement activities on a real-time basis for all permitted sources. The District also maintains a system for tracking complaints, breakdowns, VNs and NTCs. The District does not have a system for tracking required future source tests.

b. Discussion

Permit activities are tracked by computer on the Permit Services Division Program. A Permit Application Status Report and Update can be printed out which describes the status of any application submitted to the District.

Complaints and breakdowns are assigned a unique identification number and are tracked by computer data base. Complaints are logged within 24 hours and breakdowns are logged upon receipt. VNs are tracked by a number assigned to them by the Enforcement Division. NTCs are tracked on an Excel spreadsheet program maintained separately from VNs.

The Source Test Section has a source test log which records the date information is entered into the log, company and date source tested, source test number assigned to the test, District observer in attendance, and whether or not a VN



was issued. There is currently no mechanism for tracking required future source tests, however, recent changes to the District's Ingres database will allow the District to track future source tests.

c. Criteria

Permitting and enforcement activities should be tracked on a real-time basis for all permitted sources. Districts shall implement and maintain a system for tracking Notices of Violation (NOVs) from issuance to final action for all NOVs issued. Districts shall implement and maintain a tracking system for complaints received, breakdowns reported and scheduled source tests.

d. Recommendation

- o The District should develop a data base with a "tickler file" for tracking of required future source tests.

D. COMPUTER ACCESS

a. Finding

Engineers have access to District computers on a daily basis and all inspectors are expected to have laptop computers in their cars by November 1997.

b. Discussion

District engineers have access to computers on a daily basis. Permit Services and Enforcement staff use "DataBase", an in-house computer tracking system. DataBase tracks permits, fees, authorities to construct, emission inventory, excess emissions, complaints, breakdowns and VNs. DataBase is being upgraded to a system called "Ingres" which will expand the computer capability of the District.

Twenty-nine of fifty-four inspectors currently have laptop computers in their cars and all are expected to be equipped with laptops by November 1997. District inspectors also have access to computers at two District field offices and can access data over the radio.

c. Criteria

Engineers and inspectors should have access to district computers on a daily basis.

d. Recommendation

o None.

E. QUALITY CONTROL/SECURITY

a. Finding

The District has internal quality control and security procedures governing its filing system.

b. Discussion

Information in the computer data base is only accessible by password and access is denied to unauthorized users.

Permit files can only be obtained via a file room clerk. Source files can be accessed via the Radio/Telephone Operators who also work as file clerks in the records center. Source files may not be removed from the records center although information from the files can be copied.

c. Criteria

The district should maintain internal quality control or security procedures governing its filing system.

d. Recommendation

None.

## I. EQUIPMENT BREAKDOWN PROGRAM

The Breakdown Program is an important part of the District's overall enforcement program. The District's breakdown rule is the mechanism which provides a source with relief from violation charges from an emission event due to an unpredictable and unpreventable occurrence. Because pollutants can be emitted during a breakdown at greater concentrations than at controlled levels, equipment breakdowns can be significant sources of emissions. For this reason, the occurrence of equipment breakdown episodes must be kept to a minimum and of as short duration as possible by identifying and correcting them quickly.

The District's equipment breakdown program was evaluated with respect to receipt, investigation, and resolution of equipment breakdown requests. Compliance Division staff reviewed District policy and procedure documents, equipment breakdown reports, and database recordkeeping. District staff were also interviewed to ensure that actual practice is consistent with rule requirements and District policy. The data provided by the District states that during calendar year of 1996, 180 breakdowns were reported and 198 breakdowns were field investigated, with nine of them resulting in VN. A review of the District's 1996 breakdown log shows that of the 180 breakdown requests phoned in to the District, 54 (approximately 30%) were related to oil refining operations.

### A. GENERAL COMMENTS

The District has good breakdown procedures and a sophisticated breakdown program. This is most important for the BAAQMD since petrochemical facilities are numerous and many of these facilities are located relatively close to residential areas. Since petrochemical facilities are comprised of complex multi-component process and control systems which are susceptible to malfunction and have a high potential to emit toxic air contaminants and odors, well informed oversight, investigation, and handling of breakdowns by the District is of paramount importance. The sophistication of the District's breakdown program is accordingly appropriate.

The District maintains all breakdown related information in a database. Database information entry, update, compilation, and dissemination is monitored by supervisory review to ensure accuracy and consistency with District rules, regulations and policy. District inspection staff handles breakdown investigations uniformly and in accordance with written policy. Excess emissions from breakdowns are quantified and recorded as early as possible in the process.



## B. RECEIPT AND INVESTIGATION OF BREAKDOWNS

### a. Findings

All breakdowns reported to the District are investigated within 24 hours of receipt to determine if the breakdown is allowable under the District's breakdown rules. The District requires all CEM downtime notifications to be sent to the District within 24 hours and violation notices will be issued for omissions (failure to submit) under Rule 1-522.4. CEM breakdowns are investigated within 96 hours of receipt. On-site investigations are conducted for greater than 90% of breakdowns. The District has a mechanism to identify frequent breakdowns of the same equipment and can require specialized actions in these instances. The District has written procedures governing the administration of its breakdown program with guidelines to ensure that the breakdowns are handled uniformly to final resolution.

### b. Discussion

When a breakdown is reported by a source, designated District office staff enter basic information into a log and generate a breakdown ID# for each report which is then dispatched to the area inspector as soon as possible. When a breakdown is reported during other than normal working hours, and it does not meet nuisance dispatch criteria and is not an episode of danger to public health, an identification number is assigned and the area inspector is dispatched the following working day. Although the hand-written log for initial notification entry does not contain all the elements of ARB criteria, once the breakdown is investigated by the District inspector, the hand written log becomes moot as the remainder of information and that required by ARB criteria becomes part of the working database.

The District's procedure manual specifies the responsibilities of the Inspection Section, Technical Services Section, and the Compliance Services Section as they relate to investigation of breakdowns. Technical Services coordinates with Inspection to assist in documenting and obtaining information needed for an adequate evaluation. Compliance Services enters the inspector's breakdown reports into the computer data base. If breakdown relief is denied, the Compliance Services Technician will prepare a Violation Notice and enter the violation-related information into the data base. Even if none of the parameters for mandatory denial of breakdown relief apply, a Violation Notice may still be issued if the company does not demonstrate appropriate corrective action or fails to shut down the affected equipment before a new production run or 24 hours, whichever comes first. Identification of recurrent breakdowns of the same equipment (more than two times per source number per year) is addressed by written policy and includes history and maintenance background evaluation by inspection and technical staff as well as follow up review and evaluation by supervisory staff. If a facility has a breakdown

of three or more times per year of any source number, it constitutes a recurrent breakdown and the facility is issued a VN.

c. Criteria

All breakdowns reported to the district shall be investigated to determine if the breakdown is allowable under the district's breakdown rules. On-site investigations shall be conducted for at least 90 percent of the breakdowns reported to the district. The district shall have a mechanism to identify frequent breakdowns of the same equipment and require special action by the source to abate recurrent breakdowns. The district shall have a set of written procedures and guidelines to ensure that the breakdowns are handled uniformly to final resolution. All breakdowns reported to the District shall be recorded in a breakdown log.

d. Recommendation

None.

C. BREAKDOWN RESOLUTION

a. Findings

The District enforces the provisions of its breakdown rule and conducts a reinspection to determine if the breakdown was corrected and the source has returned to compliance. The District's breakdown investigation reports contain adequate documentation and include the elements required by ARB criteria. Quantification and inventory of excess emissions are handled through a systematic process.

b. Discussion

If a source is in violation of any District rule, breakdown requests that do not qualify for breakdown protection result in the issuance of a violation. If the breakdown request does not qualify for breakdown protection and the source is not in violation of any District rule, then an inspection is not conducted. The District inspects only those breakdown requests where excess emissions are involved. Quantification and inventory of excess emissions are handled through a multi-tiered systematic process that involves data collection by inspection staff, calculation and review by the Source Test Section, and oversight by supervision. The District estimates excess emissions from breakdown occurrences to the extent that it is possible. Where applicable, the inspector's breakdown investigation report requires an "excess chart" that is routed to the Source Test Section for calculation of excess emissions.

c. Criteria

The district shall enforce all requirements in its breakdown rule and conduct a reinspection to determine that the breakdown was corrected. All breakdown investigations shall be adequately documented in a breakdown report. The District should develop a systematic approach to determining and then adding emissions resulting from breakdowns to the emission inventory.

d. Recommendation

None.





## **J. RULES AND REGULATIONS PROGRAM**

In developing, modifying and enforcing its rules and regulations, districts can permit, evaluate emissions and enforce requirements placed on sources of air pollution operating within their jurisdictional boundaries. The District develops new rules and amends existing rules as part of its strategy to attain the health-based ambient air quality standards established by federal and State law.

This evaluation of the District's rule development program was done by comparing the ten criteria that ARB staff has developed for evaluating a district's rule development program with information provided by the District.

In June of 1997, the administration of the BAAQMD's rule development program was transferred from the Enforcement Division to the Planning Division. ARB has determined that the District's rule development program was being operated in a satisfactory manner.

### **A. DEVELOPING AND AMENDING NEW AND EXISTING RULES**

#### **a. Findings**

The District employs a formal rule development/amendment program which is driven by the District's Clean Air Plan (CAP, not to be confused with the ARB use of the acronym CAP which stands for Compliance Assistance Program), a formal document of projected control measures for attainment of ambient air quality standards. The BAAQMD CAP was being updated as of March 1997 and was expected for presentation to the Board by the end of 1997. All line Divisions provide input to the rule development and amendment process, with coordination under the Planning Division. Prior to June of 1997, the BAAQMD's rule development program was administered by the Enforcement Division. For each new and amended rule the District prepares staff reports (scoping papers that evolve into technical papers) which summarize the District's emission inventory specific to each rule and which quantify expected emission reductions. Scoping papers and the later technical papers are available on request to all District staff. The District has drafted enforcement and engineering guidelines for rule development which were undergoing review. The District has a program that targets rules for rule effectiveness studies.

#### **b. Discussion**

The District's rule development program is driven by their Clean Air Plan (CAP), a formal document of projected control measures for attainment of ambient air quality standards. The BAAQMD CAP was being updated as of March 1997 and

was expected for presentation to the Board by the end of 1997.

All District line divisions provide input to the rule development and amendment process through regulatory scoping papers, technical assessment memorandums, and Compliance Assistance Advisories. Compliance Assistance Advisories are one to two page notices sent by the District to members of a particular industry (affected by a new or amended rule) providing notification of a change. These advisories serve as reminders of a change in compliance requirements. An example of a change in compliance requirements would be a rule-imposed reduction in allowable volatile organic content of a coating. Staff comments and suggestions are also provided informally. As part of the recent reorganization, the District will be using multi-disciplinary teams assigned to each new and modified rule. The role of each team is to identify and modify any parts of a rule that could lead to potential problems such as conflict in interpretation and enforceability prior to bringing the rule before the board. Additional comments are received from the public at workshops and oral/written comments are received from both the Air Resources Board (ARB) and the U.S. Environmental Protection Agency (U.S. EPA).

The District prepares staff reports for each new or amended rule. The staff reports begin with a regulatory scoping paper and progress through refinement until all relevant aspects of a rule are addressed. These staff reports use the District's enforcement and engineering rule development guidelines contained in their Rule Development Handbook in helping develop the new and amended rules. The Rule Development Handbook provides general guidelines and addresses issues such as formats and processes to use and includes sample notices and other rule development standard documents. This handbook was being updated by the District's rule development coordinators and was expected for final revision by the end of 1997. All staff reports and guidelines are made available to District staff.

The District has a program that targets rules for rule effectiveness studies. Recent rule effectiveness studies have addressed emissions from boilers, dry cleaning facilities, and pressure relief valves at petroleum refineries and chemical plants.

#### c. Criteria

The district shall have a formal program to develop new rules and routinely review and update existing rules. Enforcement, engineering, planning and legal staff shall provide input to the rule development/amendment process. The District should develop a program for providing enforcement and engineering guidelines to the field enforcement and permit review staffs. These guidelines shall be updated upon rule amendment, and as otherwise needed, and kept in a central location for easy reference.



For each new rule, a staff report shall be prepared which summarizes the district's emission inventory and quantifies expected emission reductions. The enforcement guidelines should be incorporated into the staff report. These documents shall be made available to all district staff. The district shall have a program that targets rules for rule effectiveness studies.

d. Recommendation

None.

B. GUIDELINES FOR RULE INTERPRETATION PROCESS

a. Findings

The District does not have written guidelines to resolve questions arising from field enforcement of a rule. There does exist a formal rule interpretation process by way of Compliance Assistance Advisories and resolutions to the board. Questions arising from field enforcement of a rule may be addressed by permit review workgroups, particularly in cases of conflict in permitting. For example, source permits may not accurately state all new rule requirements, and the permit review workgroups combine existing permit requirements with new rule requirements into consolidated wording devoid of conflict.

b. Discussion

Although the District does not have written guidelines to resolve questions arising from field enforcement of a rule, a formal rule interpretation process exists through the input from Compliance Assistance Advisories and resolutions to the board. Compliance Assistance Advisories are one to two page notices sent by the District to members of a particular industry (affected by a new or amended rule) providing notification of a change. These advisories serve as reminders of a change in compliance requirements. An example of a change in compliance requirements would be a rule-imposed reduction in allowable volatile organic content of a coating. Enforcement related clarity of a rule has generally been well addressed during the rule development process. In very few cases in which there is question of the intent of a rule, the District has requested the board to adopt a resolution stating the intent of the rule. When a field enforcement issue with a rule arises, an inspector generally notifies a supervising inspector who then checks for related Compliance Assistance Advisories, reviews applicable policy and procedure documents, and contacts the rule development coordinator.

#### c. Criteria

The district should establish a formal rule interpretation process. Written guidelines should be prepared which outline the dynamic process designed to resolve questions from the field enforcement of a rule. These guidelines should be made available to all district staff. Documentation of resolved questions should be made available to district staff on a routine basis and also be kept in a central location for easy reference.

#### d. Recommendations

- o The district should establish a formal rule interpretation process and develop written guidelines which outline the dynamic process designed to resolve questions from the field enforcement of a rule.
- o Formalize any verbal rule interpretation process where applicable.

### C. CONSISTENCY, ENFORCEABILITY, AND CLARITY

#### a. Findings

The District's rules and regulations are consistent with applicable provisions of the Health and Safety Code (HSC), the California Clean Air Act (CCAA), the State Implementation Plan (SIP), the New Source Performance Standards (NSPS) and the National Emission Standards for Hazardous Air Pollutants (NESHAP).

#### b. Discussion

Consistency with applicable provisions of the Health and Safety Code (HSC), the California Clean Air Act (CCAA), the State Implementation Plan (SIP), the New Source Performance Standards (NSPS), the National Emission Standards for Hazardous Air Pollutants (NESHAP) is addressed by findings made in staff reports and resolutions to the board. CCAA requirements are answered by the District's Clean Air Plan. NSPS and NESHAP are rules in themselves. District rules are reviewed for all requirements of Best Available Retrofit Control Technology (BARCT), Reasonable Available Control Technology (RACT), and any additional standards. No conflicting rules have been noticed and potential conflict is considered in the rule development process. Enforceability is addressed in internal review which is based on U.S. EPA policy. ARB's comments are based on SIP approval. The District also uses its public workshops to alert them of potential problems with a rule from the regulated community, the Air Resources Board and the U.S. EPA.

c. Criteria

All rules shall be consistent with applicable provisions of the Health and Safety Code, the Clean Air Act, the State Implementation Plan, NSPS and NESHAP. All existing district rules shall be reviewed for enforceability, clarity, and BARCT/RACT consistency. Rule requirements shall not conflict with other requirements within the district. Rules shall also be consistent with other districts' rules especially within basins.

d. Recommendation

None.

D. MEETING ARB/CAPCOA PROTOCOLS

a. Finding

The District has met ARB/CAPCOA rule review protocols when submitting draft, proposed or adopted rules to ARB.

b. Discussion

Communication with ARB's Rule Evaluation Section in the Stationary Source Division confirmed that the District is not under threat of U.S. EPA sanction for non-development of a State Implementation Plan (SIP) required rule. The District's Rule Development Handbook includes the policy to ensure that ARB/CAPCOA protocols are met when submitting draft, proposed, and adopted rules to ARB. During the study period, ARB was properly notified of workshops of proposed rule amendment in accordance with protocol.

c. Criteria

The district shall ensure that ARB/CAPCOA protocols are met when submitting draft, proposed and adopted rules to ARB.

d. Recommendation

None.





#### **IV. PERMITTING PROGRAM EVALUATION**

Permitting regulations are adopted by air pollution control districts to govern the construction of new sources and modifications to existing sources which emit air contaminants within their jurisdiction. Section 42300 of the California Health and Safety Code (HSC) and Sections 172 (c)(5) and 173 of the Federal Clean Air Act (as amended in 1990) allow districts to establish such permitting regulations. Additionally these regulations must ensure the attainment or maintenance of applicable ambient air quality standards, and according to Section 42301 of the HSC be at least as stringent as federal regulations (40 Code of Federal Regulations 51.160). In response to these requirements, the Bay Area Air Quality Management District (District) has adopted Regulation 2.

The District's current permitting regulation is divided into 7 rules. The general permitting requirements and exemptions are covered by Rule 1. Rule 2 (last revised June 7, 1995) provides for the review of new and modified sources of air pollution. It contains definitions of key permitting language and the emission limits for applying best available control technology and offsets. Rule 3 has special procedures for the review and standards for the approval of authorities to construct power plants in the District. Rule 4 (last revised June 15, 1994) provides an administrative mechanism for quantifying, adjusting, and certifying surplus emission reductions for later use as offsets of emission increases within a facility or banked to offset emission increases from similar facilities. Rule 6 is for implementing the operating permit requirements of Title V from the Federal Clean Air Act Amendments as of 1990. Rule 7 adopts provisions of 40 CFR Part 72 to implement an acid rain program that meets the requirements Title IV of the clean air act.

The goal of the District's stationary source regulatory program is to review new and modified sources of air pollution and provide mechanisms including emission tradeoffs by which permits may be granted, without interfering with the attainment or maintenance of ambient air quality standards. The new source review rule also provides for no net increase in emissions above specified thresholds from new and modified stationary sources of all nonattainment pollutants and their precursors. The permitting process must also ensure that no project will be permitted unless the air pollution control officer is satisfied that the project will be in compliance with all applicable rules and regulations. To determine how effective the District has been in accomplishing its goals, the Air Resources Board (ARB) staff has reviewed the District's permitting program.

The objective of the permitting program evaluation was to determine whether the District has been issuing permits in accordance with Regulation 2 and with State law, to identify emission reduction opportunities available to the District,

and to improve the efficiency of the District's program. Methodology adopted by ARB staff to achieve the above objective consisted of a review of the District's permit files, review of guidelines and policy documents, and interviews with staff and management. The review of permit files focused on the quality of the engineering analyses and the resulting operating permits issued to the facility. Interviews covered areas such as general administration, permit processing, filing and application intake, computer support, staff resources, and emission calculation procedures.

In conducting the program evaluation, ARB staff reviewed approximately 117 permit files for newly permitted sources or modifications to existing sources that received permits in 1996 and 1997. A conscious effort was made to cover a broad spectrum of the District's permitting actions by reviewing files for different source types and sizes.

The following key elements of the District's permitting program were evaluated by ARB staff:

- 1) The adequacy, existence, and effectiveness of the District's permitting policies.
- 2) The District's ability to perform engineering analyses of proposed projects.
- 3) The adequacy of permit conditions, including incorporation of all assumptions used in the engineering analysis, enforceability of permit conditions, and periodic review of permit conditions.
- 4) The calculation and tracking of emissions to determine the applicability of New Source Review requirements.
- 5) The determination of best available control technology.
- 6) The organization of the District's files and current data management capability.
- 7) The consistency of District permitting actions between different permit engineers.

The ARB staff's findings and recommendations are included in the following chapters A through E.



## **A. PERMIT ADMINISTRATION - GENERAL**

This chapter contains general findings of the District's permit administration program based on the review of recent permitting actions and interviews with staff and management. Specific findings and recommendations related to adequacy of permit conditions, correctness of engineering evaluations, choice of control technology, emission offsets, etc. are discussed in sections B through E.

All areas related to permit administration indicate that the program is being administered in a satisfactory manner. These areas mainly include computers and software, filing system, formats for engineering evaluations and permit conditions, tracking of applications, application intake mechanism, and notification procedures.

The District has standardized application forms for many equipment/industry types that help guide sources to furnish complete applications. These forms also work well as examples for other California districts to emulate. On the front of every permit the District has a form that contains detailed information on the source including the regulations that apply, toxics review, status, emissions summary, BACT, and offsets.

The District has an excellent data management system which tracks applications from the time they enter the system until the permit is issued. This assures that all legal time lines for processing applications and issuing notifications are being satisfied by the District. In addition, the filing system was well organized and managed, making files readily accessible to ARB staff.

The District has a variety of means for dissemination of permit related information to the public including a web site, telephone (Technical/Regulatory Area Assignments), in-person at the District, and at Permit Assistance Centers.

Permits issued by the District have conditions that are enforceable and can qualify as stand alone documents. There is no formal mechanism for reviewing permit conditions on an annual basis. However, efficient communication between permit engineers and field inspectors has ensured that any existing vague permit conditions are changed to increase enforceability.

We feel the District can improve its permits by adding the "right of entry" clause, listing requirements of applicable prohibitory rules on permits, and developing an annual permit review program. Permits should have a right of entry clause so that District, ARB, or EPA personnel can enter a facility without complications or delays. We found that the district did not put all requirements of applicable prohibitory rules such as those that require closed containers for solvent soaked rags. The District does not have an official annual permit review program as

required by Health and Safety Code 42301 (e). In addition, the District should add a clause to its permits indicating that they should be posted or readily accessible to District, ARB, or EPA personnel.

Generally, the engineering evaluations and permits are comprehensive and display a good understanding of the project by the permit engineer. The evaluations are detailed and describe the proposed project, basic and associated control equipment, and resulting emissions. The evaluations contain emission calculations, references, compliance with applicable rules, and discuss permit conditions.

However, there are several areas where evaluations triggering Best Available Control Technology (BACT) can be improved. Some files do not reference the BACT clearinghouse where the control technology chosen was found through research. More documentation should be included in files especially with those where cost effectiveness of a technology is an issue. It is important that every engineering evaluation contain a discussion and documentation which clearly states the reasoning for the District's choice of a particular technology and emission limits as meeting BACT criteria. We also feel the District could have required stricter BACT controls on some of the files.

We are particularly interested that requirements related to source testing (by type and size of equipment, need for initial test, frequency of subsequent source tests) be standardized and included in the permit conditions manual or in the procedures handbook. The need for source testing a particular piece of equipment should be purely an engineering decision based on type and size of equipment, emissions potential, type of controls, existence of alternate ways to determine compliance, etc. Discussion with District staff revealed that source test requirements placed on permitted equipment were largely governed by the resources available to the District's in-house source testing team. It is District policy that all compliance source tests be conducted by their personnel. We have no problems with this system as long as sufficient resources are available to the District and this policy does not pose a bottleneck to the testing needs of the District's permitted universe. In practice, this is not true and source test needs are being compromised to accommodate available resources. We recommend that Bay Area augment its own source testing capability by allowing approved independent source test contractors to conduct compliance source tests. Such contractors are used by facilities in the other 34 districts. Test protocols, actual tests, and final reports are reviewed/witnessed by district staff for quality assurance.

The District has a well administered emission offset program which is designed to make progress toward attainment of air quality standard while allowing sources to modify or build new equipment. We found that some evaluations could be improved by providing more documentation in the files. This would more clearly

verify emission credits and decisions made about offsets.

The District complies with HSC Section 42301.6 which requires an applicant to certify whether the proposed source or modification is within 1000 feet from the outer boundary of a school site. Prescribed procedures are followed by the District if the source is within the 1000 foot radius.





## **B. ADEQUACY OF PERMIT CONDITIONS**

### **1. General Comments**

In general, the Bay Area Air Quality Management District has issued permits that can qualify as "stand alone" documents. Most permit conditions reviewed were clear and enforceable based on the review of recently issued permits and feedback from field inspections conducted during the program evaluation. We did not encounter any permits with vague (unenforceable) conditions. This is mainly due to having permit engineers assigned to specific categories and/or industries. Permit services has established a permit management information system with certain quality control procedures that are designed to eliminate writing vague permit conditions. Good communication between the permit engineers and the field inspectors has contributed to a continuous improvement in the quality of permits. However, the District has not instituted any formal mechanism to undertake an annual review of permits to update them for enforceability and compliance with current law as required by Health and Safety Code Section 42301 (e).

### **2. Findings**

a) Most permits reviewed were simple and easy to understand. However, permits do not contain legal requirements such as: "right of entry" clause that allows district, ARB or EPA personnel to enter and inspect the facility without any complications or delays. There is also no provision in the permits that tells the source that permits must be posted or readily available upon request from District, ARB, or EPA personnel.

b) In general, most permits do not incorporate the requirements of applicable prohibitory rules as permit conditions. An explicit mention of such requirements in the form of permit conditions would benefit smaller sources in understanding and complying with District regulations.

c) The district has not officially developed a program to undertake an annual review of permits to update them for enforceability and compliance with current law. This type of reevaluation is required by Health and Safety Code Section 42301 (e).

d) The District does not have a standard bank of permit conditions for specific source category and equipment type. Permit engineers normally refer to permit conditions issued for similar type of operations in previously issued permits. All permit conditions reviewed reflected assumptions made in the engineering evaluations and were properly transferred from an authority to construct to a permit to operate.

e) Most of the permit conditions reviewed were clear, concise and enforceable.

### 3. Discussion

a) The majority of the permits reviewed lack a right of entry clause as delineated by the Health and Safety Code Section 41510. Such a clause should be included in every permit to allow district enforcement staff to inspect facility without any complication or delay. Permits also do not contain a provision that permits be posted or readily available upon an inspector's request pursuant to District Rule 2-1-405. Operators could also benefit by having permits readily available. This would allow operators to perform self-inspections and remind them periodically of permit conditions.

b) Permits do not list the requirements of applicable prohibitory rules as permit conditions. This would benefit smaller sources to comply with the law. Sources handling solvents such as automotive refinishing shops should list rule requirements that describe good housekeeping practices such as storing solvent soaked rags in closed containers, keeping lids on coatings and other solvent materials except when they are in use, etc.

c) We acknowledge the excellent communication protocol established by the district that allows district inspectors and permit engineers to communicate whenever they encounter vague or unenforceable permit conditions during inspections. However, there is no formalized annual review of permit conditions set by the District to reevaluate permit conditions to ensure compliance with listed permit conditions and applicable rules and regulations as required by the Health and Safety Code Section 42301 (e). One way of achieving this requirement is by linking the review process to the annual inspection. Permit conditions and facility equipment could be reviewed during the annual inspection to insure enforceability and compliance with current rules.

d) The District is currently working on updating their permit manual that contains some sample permit conditions and is developing a model that will assist permit engineers in using more standardized permit conditions. Most permit conditions reviewed were fairly consistent on similar type projects.

e) The following paragraph discusses some permit conditions that are vague and/or unenforceable.

While reviewing permit files, we found condition 6a from application 16584(plant 616 -Hewlett Packard) could be more specific as to what records needed to be maintained by either referring to the proper condition(condition 1 in this case) or



specifying the type of materials (solvents, photo resist maskant, and photo resist developer) used monthly.

Permit condition 3 from application 14067 (plant 4229 - S & Z California Pacific Coffee Co., Inc.) requires that the operating temperature of A-1 shall be not less than 1200 degree Fahrenheit. However, there is no permit condition that requires a temperature gauge to be installed. This makes this condition unenforceable. The District's permit handbook on page 28-5 provides a sample permit condition(sample 5) where it says that the incinerator shall be equipped with a District approved temperature indicator and continuous temperature recorder. Also, condition 4 requires that the destruction efficiency of A-1 for particulate matters and organic compounds shall be equal or greater than 95% by weight when operating at 1200 degree Fahrenheit or greater. There is no provision to verify the minimum destruction efficiency after initial operation of the incinerator. There is no condition that specifies the incinerator must be maintained in good operating condition according to the manufacturer's specifications.

On Application 25197(plant 10408 - County Asphalt) condition 6 requires that the rotary dryer(S-4) shall burn only natural gas, except liquid petroleum gas may be used as a backup fuel in the event of an emergency natural gas curtailment or shutdown. There is no provision in this permit to keep track of the amount of natural gas used and there is no totalizing fuel meter installed on this source to keep track of how much natural gas is being used. Also, if there is a natural gas curtailment, there is no record keeping requirement of how much liquid petroleum gas was used during. An example of an ideal condition is on application 15496(plant 595- Mission Valley Asphalt Company) condition 11 and states the following: The usage of natural gas at S-1, as measured at a District approved fuel meter dedicated solely to this source, shall be recorded monthly in cubic feet(or thousands of cubic feet) in a district approved log. This log shall be retained for at least five years from date of last entry. This log shall be kept on site and made available to the District staff upon request.

On April 17, 1997 ARB staff along with a District inspector inspected United Airlines maintenance facility. Due to the number of permitted sources, most of this inspection was concentrated on several grit blast machines located in different buildings. During the inspection process, there was some difficulty in identifying each source, and there were some grit blast machines (PV 6252, 6224, 6255, 6202, and 6203) whose status was questioned (permitted or exempt sources) by the source. Each grit blast machine is suppose to have a PV number assigned. However, there was some difficulty in finding the PV number. An easier approach to help identify each grit blaster machine is to have its serial number listed on the permit as part of the equipment description.

Permit condition number one on application number 17174, plant number 11340,

MAACO Auto Painting - San Leandro is hard to enforce because net coating usage is only expressed in pounds of VOC per day and/or month. The usage limit could be improved for clarity and enforceability by also expressing it in a volume measurement such as gallons per day.

#### 4. Criteria

- o Permit conditions must be adequate in order to be enforceable and to ensure sources can comply with permit condition requirements. They must satisfy local, state, and federal requirements and must reflect assumptions made in the permit evaluations. Permit conditions must also adequately describe applicable prohibitory rule constraints.

#### 5. Recommendations

- o We recommend that administrative or “legalese” type of conditions should include the a right of entry clause to allow district enforcement staff to inspect facilities without any complications or delays, “severability”, and provisions for permits to be posted near the operating equipment or equipment operator. This will allow equipment operators to perform self- inspections and remind them to continually follow permit operation conditions.

- o All permit conditions should be annually updated to ensure compliance and enforceability with current regulations. The district should institute procedures to comply with this requirement as pursuant to Health and Safety Code 42301(e).

- o Any source that require startup source test, should have on their permit conditions that states the frequency of future source test requirements unless, the source has a CEM installed and working according to District CEM requirements. The frequency of source tests could be based on the type of equipment, size, and rule requirements.

- o In order to help identify equipment in a facility, permits should have serial numbers or proper location reference points for the permitted equipment. This would especially help identify equipment in facilities with large numbers of similar units.

- o A standard bank of permit conditions should be developed to standardize the process of assigning permit conditions to individual applications.

## C. ACCURACY OF PERMIT EVALUATIONS

### 1. General Comments

Permit to operate and authorities to construct applications generally consist of new source review, change of permit conditions, permit corrections, equipment modification, permit consolidation, partial transfer of ownership, etc. During the calendar year of 1996, the District issued approximately 522 authority to construct permits for 828 sources and 841 permits to operate for 1494 sources. After an application is deemed complete, District staff perform an engineering evaluation for the project using emission factors and/or source test data, operational data, manufacturer's data and other engineering techniques to calculate the project's potential emissions and to decide necessary permit conditions and possible control requirements.

### 2. Findings

a) Overall, the engineering evaluations reviewed are comprehensive, contain detailed analyses of the proposed projects, and display a good understanding of the project by the permit engineer. The District has a well-established mechanism to ensure each permit evaluation addresses the key elements such as new source review, compliance with prohibitory rules, toxics review, BACT, emission offsets and banking, emission increases/decreases, CEQA review, NESHAPS, PSD.

b) The District has assigned each permit engineer a certain category and/or industry. This, combined with the low turnover of permit engineers alleviates the problem of inconsistencies when doing engineering evaluations. The District also has a permit handbook used by permit engineers. Each category addresses a description, application contents, completeness, regulations, abatement equipment, standards, emissions, conditions, enforcement, fees, and toxics. This handbook covers thirty-eight different equipment categories.

c) Source tests were required on major or novel sources in order to verify assumptions stated in the emission calculation estimates. However, there is no formal policy to guide staff on the need for future source test requirements as required by ARB's Criteria for Assessing District Enforcement and Permitting Program Adequacy.

d) Most permit evaluations contain supporting documentation to justify emission factors used. However, we found some instances where the engineering evaluation did not document whether the permit engineer had independently verified the emission factors and calculations provided by the applicant.



### 3. Discussion

a) Permit to operate and authority to construct applications consist mainly of new equipment that may cause air pollution, modifying equipment that may cause air pollution, business change ownership, or the transfer of equipment from one location to another. After the district deems an application complete, the BAAQMD permit engineer performs a permit evaluation using emission factors, data from equipment manufacturers, source test data, and/or other engineering techniques to estimate the potential emissions and to determine applicable control requirements.

ARB staff reviewed permit evaluations from different equipment/source categories including: Blasting Units, Boilers, Coffee Roasters, Dry Cleaners, Asphalt Units, ICE, Graphics Arts and Printing, Landfills, Motor Vehicle Coating, Can and Coil Coating, Refineries, Incinerators, etc. Most permit evaluations within the same category are consistent.

Evaluations involving generation of emission reduction credits receive a careful review by the district (in many cases, the actual amount granted were far less than the ERCs requested by the source). Net emission increases, offsets, credit used, are tracked through the computerized emission tracking system.

Most permit evaluations contain supporting documentation to justify emission factors used. However, we found some instances where the engineering evaluation did not document whether the permit engineer had independently verified the emission factors and calculations provided by the applicant.

b) All of the district permit handbook categories were written between in 1991 and 1993 and have not been updated ever since. The district is in the process of updating the permit handbook manual. In general, most evaluations reviewed followed the protocol and guidelines set by the permit handbook. Several categories from the permit handbook were reviewed to ensure the information such as rule requirements, emission limits, BACT requirements were up-to-date.

c) Application 25671, plant 207(Quebecor), source 22(boiler), there is only an initial condition to source test the boiler. There is no condition to source test the boiler on a certain frequency(annually). We found this to be a standard practice in others permits that were reviewed, where there is no source test requirements in the permits after the start up source test. The source test is left at the discretion of the inspector since there is no policy guidance on how often a source gets tested. For more information, see Source Testing Program Section on this report. Other districts such as the Santa Barbara Air Pollution Control District and the Sacramento Air Quality Management District have frequencies of source test requirements on their permits.

d) On application number 5258, plant number 1703, Inter-city Drycleaners, we found that the permit evaluation does not reference the source for emission factor in the calculation section. Again, on the calculations section from application number 16901, plant number 6984, Lifescan Inc., there is no reference on where the VOC content came from. Although, the emission factors(VOC content) used in these categories may be fairly standard, there should be a reference to the origin of the VOC content. On application number 17174, plant 11340, MAACO Auto Painting & Bodyworks - San Leandro we found that the source hired a consultant to do the permit application. The consultant submitted a report with emission calculations and referred to material safety data sheets (MSDS) for VOC content. However, there were no MSDS in the source file to verify the emission calculations or anything in the evaluation report to document that these numbers were verified.

#### 4. Criteria

Engineering evaluations will be complete, accurate, and technically sound.

#### 5. Recommendations

- o The District should document the source of emission factors and related data used to estimate project emissions. If the source provides data, the District should verify and document that the source has provided accurate and reliable data.

- o The District should formulate a policy describing source test requirements (both start up and routine) based on equipment type and size.

- o The District should review and update the permit handbook periodically to ensure all references such as BACT determinations, rules and regulations, and emission limits are current.





## **D. BEST AVAILABLE CONTROL TECHNOLOGY DETERMINATIONS**

### **1. General Comments**

The District has developed a comprehensive BACT analysis program. The District's engineering evaluations are concise. The District has developed its own BACT guidelines and procedures (BACT/TBACT Workbook). The workbook provides engineers with clear procedures for applying BACT guidelines within the District.

Any new or modified source that has an increase of pollutants including precursor organic compounds (POC), non-precursor organic compounds (NPOC), nitrogen oxides (NO<sub>x</sub>), sulfur dioxide (SO<sub>2</sub>), PM<sub>10</sub> or carbon monoxide in excess of 10.0 pounds per highest day requires BACT. The District regulation also requires BACT for some toxics and other compounds depending on the degree of the increase of emissions.

### **2. Findings**

a. The District's engineering evaluations do not show any evidence of research of BACT clearinghouses outside of the District such as EPA, ARB/CAPCOA or SCAQMD. Some engineering evaluations with a BACT analysis need a more complete justification of the BACT chosen.

b. Evaluations where cost effectiveness is considered could also be made more clear. For example, if BACT 2 (or an intermediate level) is selected instead of the technologically feasible/cost effective BACT 1 listed in the District BACT/TBACT Workbook, then the discussion should include a justification for selection of the less stringent option. The District often selects the less stringent BACT 2 instead of BACT 1.

c. The District has developed a BACT/TBACT workbook that is an excellent reference document for permit engineers. The guide assists staff in determining best available control technology requirements for sources which have triggered the District's new source review thresholds for BACT.

d. The District does not have established procedures for updating its BACT/TBACT workbook. The workbook was last updated in June 1995.

e. The District should formalize the role of its BACT coordinator.

f. Emissions in engineering evaluations are sometimes not totaled in lbs./day, making it difficult to determine if the BACT threshold of 10 lbs./day is

exceeded upon initial inspection of the file.

### 3. Discussion

a. Although the District's evaluations are concise and to the point, in some cases they fail to provide adequate references or justification for the choice of a particular control technology. In some evaluations where BACT is triggered, the engineer does not mention how they arrived at the chosen technology for the source to use. For example, Hard Chrome Engineering, application #16860, which involved using controls on hard chrome plating baths because T-BACT was triggered, stated, "projects with a risk between 1 and 10 in a million cannot be approved unless the emission level represents the level after the installation of T-BACT. Since the use of bath controls followed by downstream source controls represents T-BACT for hard chrome plating operations, we conclude the project risk level is acceptable and therefore recommend project approval. Floating plastic balls and wet scrubbing will be used to achieve compliance with the BAAQMD risk management policy, Regulation 11-8, and with the Federal NESHAP..." No reference was ever made to the District BACT/T-BACT Workbook or any other BACT clearinghouse for the control technology applied to the source.

In another BACT evaluation, Berkeley Asphalt Co., the permit engineer states, "This application will meet the BACT requirement through the use of both low NO<sub>x</sub> burners and a baghouse achieving 0.01 grains per dry standard cubic foot. BACT for SO<sub>2</sub> is the use of natural gas." There was no reference to the District's BACT/T-BACT Workbook or any other BACT clearinghouse.

In Citation Press, application #16912, the BACT section of the evaluation stated that, "BACT is triggered by each of the proposed sources. However, BACT is satisfied according to BACT Guideline. BACT is also imposed in the permit condition for compliance purpose." The BACT guideline is not stated. The evaluation does not discuss how BACT is satisfied.

Other evaluations without reference to any BACT clearinghouse included: Syar Industries Inc. #15438, Simsmetal America #16612, Southwest Soil Remediation #16338, Clean Soils California #15882, United Can Company #25460, Berkeley Asphalt #16712, and Maxim Integrated Products #16491.

b. In some evaluations, technically feasible (BACT 1) would be the level of BACT chosen, but the source would not meet all the requirements for BACT 1. According to the District's BACT/T-BACT Workbook the achieved in practice (BACT 2) level, a less stringent form of BACT, may be used instead of the technically feasible (BACT 1) level if BACT 1 is found not to be cost effective.

A facility has the burden of establishing that a control technology is technically or economically infeasible. There are three main steps involved in determining cost effectiveness including calculating emission reductions resulting from a selected control technology, calculating the costs of implementing the control technology (annualized capital equipment costs, annual maintenance and operational costs, depreciation and tax deductible costs, etc.), and dividing the costs by the emissions reduced. This results in a ratio of costs per unit pollutant, usually dollars per ton. The District has established cost effectiveness guidelines in its BACT/TBACT workbook for different pollutants including POC, NO<sub>x</sub>, SO<sub>2</sub>, PM<sub>10</sub> and spray booths. If the dollars per ton ratio from a source is less than the ratio established in the District's guidelines, then the technically feasible BACT 1 should generally be required.

In Deluxe Check Printers, application #17155, BACT 1 was required in the engineering evaluation, but the main clean-up solvent used by the source, Kwik Dry 66, does not meet the BACT 1 requirement. Kwik Dry 66 has a vapor pressure less than 12 mmHg, but BACT 1 requires clean-up solvents have a vapor pressure less than 5 mmHg and BACT 2 requires clean-up solvents have a vapor pressure less than 25 mmHg. In addition, the source was permitted to use dilute solutions of IPA less than 30% by volume that met BACT 2. According to the District's Workbook BACT 2 can be applied if BACT 1 is not cost effective, but there is no cost effectiveness analysis in the file. The evaluation only states that the company had not found a replacement clean-up solvent for Kwik Dry 66 and that they would use dilute solutions of IPA on rare occasions to meet BACT 2. The permit conditions also do not state that IPA must be diluted so that it is less than 30% by volume.

In addition, other evaluations for lithographic printing presses including Carpenter Printing, application #16687, Lois Roesch, application #15621, U.S. Print Corp., application #15736, and Craftmen Printing, application #15558 lacked documentation for BACT and cost effectiveness. For Carpenter Printing, the evaluation stated that IPA did not meet BACT, but the source would use the solvent as part of their fountain solution instead of a clean-up solvent. The permit conditions allow the source to use fountain solutions containing up to 10% VOC by volume which only meets BACT 2. The evaluation made did not contain any discussion about the stricter BACT 1 requirements or cost effectiveness. The evaluation for U.S. Print Corporation was better than some other printing press evaluations since the engineer stated it was not cost effective for the source to abate its three printing presses by an afterburner or carbon adsorber, but there was no reference to any policy or calculations to document this. The evaluation for Craftmen Printing states that add-on controls are not cost effective because a majority of the emissions are non-point source emissions. The calculations in this evaluation also seemed somewhat confusing because there was one "draft" evaluation with hand



written corrections of errors and an updated version that had the corrected calculations, but with an error that was not in the draft version.

For application #16368, Synergy Semiconductor, the technically feasible BACT 1 should have been required instead of the achieved in practice BACT 2. The source was required to have a thermal oxidizer to abate photoresist tracks to meet BACT 1, but for solvent stations only a freeboard ratio greater or equal to 1 was required which is BACT 2. No cost effectiveness evaluation was supplied with the evaluation showing that technically feasible BACT 1 was not cost effective for the solvent stations. BACT 1 requires that the solvent cleaning stations be enclosed and vented to an abatement system with a destruction efficiency equivalent to or greater than 90%. Furthermore, the source already has existing control equipment which may be able to abate the solvent stations. Controlling emissions with an abatement system instead of a freeboard ratio is a much better method of emission control.

Application #14570, James River Corporation, is another evaluation where the District could have worked to enforce the more stringent technically feasible BACT 1 instead of the less stringent achieved in practice BACT 2. The facility was required to comply with rule 8-20-302 for its gravure coating operations, which limits the VOC content of its coatings to 2.5 lb/gallon (less water). The facility triggered BACT for POC emissions, so it was required to meet BACT 2, which also requires the use of low VOC coatings equivalent to or below 2.5 lb/gallon. In this case the BACT limit is essentially the same as the prohibitory rule. There was no cost effectiveness evaluation showing that BACT 1, which requires a control device with over 90% destruction efficiency, was not feasible.

c. The District's BACT/TBACT Workbook is a good reference for permit engineers. It has an extensive list of BACT technologies to use for different categories of sources. It has complete discussions on BACT and TBACT and how to apply them in the District. It also contains a section on cost effectiveness that clearly describes how to calculate the annualized cost, the capital recovery factor and how to use other factors to determine cost effectiveness. It also contains example cost effectiveness calculations and cost effectiveness levels for different pollutants and coating operations. A flow chart that clearly illustrates how to apply BACT is also included.

d. A challenge for the District in having its own BACT/T-BACT Workbook is keeping it up to date. Having procedures to regularly update the workbook would help keep their BACT guidelines up to date on a more consistent basis. The District has not updated the workbook since June 1995 and we believe it can keep its BACT determinations more up to date by paying close attention to the new BACT determinations coming from other Districts. The District could also provide assistance to the ARB/CAPCOA BACT clearinghouse by sending in new

## BACT determinations.

We found several BACT guidelines from the District's workbook that could have been more up to date. For example, in the South Coast Air Quality Management District (SCAQMD), their BACT guideline for NO<sub>x</sub> emissions from boilers greater than 33.5 MMBtuH is down to 9 ppm @ 3% O<sub>2</sub> for technically feasible, but in the BAAQMD their workbook states that the lowest NO<sub>x</sub> level for technically feasible is 20 ppm @ 3% O<sub>2</sub>. Ventura made a BACT determination of 0.15 g/Bhp-hr for NO<sub>x</sub> from a 130 hp natural gas, stationary internal combustion engine, but the BAAQMD does not have a category for engines under 250 hp and their BACT 1 guideline is 0.3 g/Bhp-hr.

Mare Island Naval Shipyard, application #16747, dealt with a 29.3 MMBtuH boiler and BACT was triggered. The BACT section of the evaluation stated BACT 2 emission limits would be imposed (25 ppmv NO<sub>x</sub>, 50 ppmv CO), but since 4/5/90 SCAQMD has had a NO<sub>x</sub> BACT limit for boilers of this size as low as 9 ppmv.

e. We feel the District would benefit by using a centralized BACT coordinator. A BACT coordinator reviews projects that have exceeded the BACT trigger levels and assists engineers by analyzing and commenting on the BACT analysis submitted by applicants. Having a BACT coordinator helps ensure that all BACT determinations are reviewed and are consistent with other BACT determinations. The coordinator can also help distribute new BACT determinations to staff engineers and update the District BACT WorkBook on a periodic basis by researching other clearinghouses. This concept has been used by some other districts with a large number of permitting staff to conserve engineering resources and produce uniform BACT analysis.

f. Some evaluations would be more clear if the total emissions from every source were in units of lbs./day. Otherwise, upon initial inspection of a file it is unclear if BACT is triggered without the use of conversion factors since the BACT trigger level are in units of lbs/day by regulation. For example, Berkeley Asphalt, application #16712, has NO<sub>x</sub>, CO, and SO<sub>2</sub> for each source in lb/yr and tons/yr. Similarly, application #25730, Seagate Magnetics, has POC emissions in lbs/yr and tons/yr. It is also important that emissions are in units of tons/yr to see if offsets are required since the amount of emissions triggering offsets is in units of tons/yr by regulation. All the applications reviewed had emissions calculated in tons/yr.

## 4. Criteria

a. All BACT clearinghouses such as EPA, ARB/CAPCOA, SCAQMD should be researched as part of the BACT determination.

b. All engineering evaluations shall contain a complete BACT analysis, if required. All BACT determinations should have sufficient documentation, discussion, and analysis to justify a determination. A list of the technologies proposed by the applicant and those identified by District staff while searching clearinghouses should be included.

c. The District shall establish guidelines and procedures which clearly state the methodology used for calculating the cost effectiveness of a control. These guidelines, as well as cost effectiveness values selected by the District shall be updated on a regular basis.

d. The District should independently verify cost figures used in a cost effectiveness analysis submitted by an applicant by contacting independent vendors, contractors, equipment manufacturers, etc.

## 5. Recommendations

o In engineering evaluations with BACT determinations, the District should reference the BACT clearinghouse where the control was found.

o Evaluations should include sufficient discussion to justify the level of BACT chosen. In evaluations using BACT 2, if a complete cost effectiveness evaluation is not included, then the evaluation should reference a policy or procedure that indicates that it would not be cost effective for the source to use the technically feasible BACT 1.

o Cost effectiveness analyses should include an independent verification of cost figures submitted by applicants by contacting independent vendors, contractors, equipment manufacturers, etc.

o Emissions that trigger BACT should be in units of lbs/day in the engineering evaluations so that it is possible to tell if BACT is triggered without using conversion factors to change emissions to lbs/day.

o The District should continue using and improving its BACT/T-BACT Workbook. Procedures for updating its workbook should be adopted so it can be updated on a consistent basis.

o The District's central BACT coordinator should review BACT determinations, circulate new BACT decisions among staff, and research other clearinghouses to update the District's BACT WorkBook.

o The District should forward new BACT determinations made to the



ABB/CAPCOA clearinghouse on a regular basis.



## **E. EMISSION OFFSETS PROGRAM**

### **1. General Comments**

The Bay Area Air Quality Management District is currently administrating an emission offset program to make progress towards the attainment of air quality standards. New or modified sources that require offsets must obtain enforceable, real, surplus, quantifiable and permanent emission reductions from existing sources before modification or construction.

According to District rule 2-2-302, new or modified sources that are permitted to emit 50 tons or more per year of nitrogen oxides (NO<sub>x</sub>) or precursor organic compounds (POC) must offset those emissions at a ratio of 1.15 to 1.0 and sources permitted to emit between 15 and 50 tons a year of nitrogen oxides (NO<sub>x</sub>) or precursor organic compounds (POC) must offset at a ratio of 1.0 to 1.0. Major facilities are required to offset emission increases of PM<sub>10</sub> or sulfur dioxide in excess of 1.0 ton per year must at a 1.0 to 1.0 ratio. Major facilities have a potential to emit over 100 tons per year of a specific pollutant or 10 tons per year of any hazardous pollutant or 25 tons per year of a combination of hazardous pollutants.

### **2. Findings**

a. Evaluations where emission reduction credits were generated were generally concise and well organized.

b. The District has an organized system for tracking emissions. It has a computer system that engineers use to track emissions. Each evaluation also has a folder which clearly indicates whether there were emission offsets or credits and the amount of the emissions.

c. Some evaluations could be improved by providing more documentation in the file. For example, samples could be taken or MSDS could be provided in some evaluations to verify the amount of volatile compounds in solvents to determine historical actual emissions.

### **3. Discussion**

a. Evaluations that required emission reduction credits were generally in good order. For example, Laidlaw Gas Recovery, application #16948, only allowed the source to bank the net emissions from the shutdown of two engines, since the landfill gas that fueled the engines was still going to be flared. The application referenced regulation 2-4-303.2 to justify the procedure. Source test data was used to determine the emissions from the engines and from the flaring of the landfill gas.



In application #25877, Del Monte Foods, a complete evaluation was provided for the emission reduction credits that were generated from the shutdown of canning equipment. The emission credits were not based on the twelve months before the shutdown, but a justification for the alternate period used was provided. The regulation allowing the use of an alternate period was also referenced. Source tests from two different years were used to determine the historical actual emissions and the source test results were in the file. Tables summarizing emissions and sample calculations were provided. The evaluation also indicated that credited emissions were adjusted to meet the limits of reasonably available control technology per Regulation 8, Rule 7 and the District Clean Air Plan.

b. The District has a computer system that keeps track of emission offset and emission reduction credits for each application. When looking up an application the computer displays all applicable emissions including particulate matter (PM), precursor organic compounds (POC), nitrogen oxides (NO<sub>x</sub>), sulfur dioxide (SO<sub>2</sub>), carbon monoxide (CO), non-precursor organic compounds, and particulate matter less than 10 micrometers in diameter (PM<sub>10</sub>) and the emission credits requested, approved and the balance for each pollutant. The front of every file also has a form which allows the District to keep track of files that have offsets and the emission increases and decreases of all applicable pollutants.

c. Some evaluations with emissions offsets and emission reduction credits could be more clear with more documentation to verify that credited emissions are real surplus quantifiable and permanent. For example, Suba Manufacturing, application #14958, indicated that the VOC content of the solvents used to calculate credited emissions were from the company's purchase records, but the records were not in the file.

AMP Printing, application #15495 could be more clear with more documentation. In this application calculations show that the increase in emissions from the construction of a lithographic printing press will be 13.666 tpy of POC. The emissions summary table on the front of the file also stated that the increase in emissions was 13.666 tpy. According to regulation 2-2-302 offsets are required if emissions of POC are over 15 tons per year. The offset section of the application states that POC emissions from the facility will be 18.216 tpy and there is no documentation stating where these emissions are from or calculations indicating how this figure was determined.

Application #17174, MAACO Auto Painting & Repair also lacks documentation and is somewhat confusing. The first permit condition in this evaluation states that "Net coating usage as applied at this facility (coating + reducers + catalyst) shall not exceed 9626 pounds of Volatile Organic Compounds (V.O.C.)

gallons in any consecutive twelve month period.” This statement is confusing since it is not clear whether pounds or gallons of V.O.C. are being regulated. Furthermore it is not evident from the engineering evaluation or any other part of the file how the 9626 was determined. If the pounds of V.O.C. are summed not including the cleanup solvents then a number close to 9626 pounds of V.O.C. per year is attained. It would be more clear if this was indicated in the engineering evaluation. In addition, the engineering evaluation indicates that the emissions resulting from the authority to construct were 5.82 tpy. On the emission summary sheet in the front of the file the emission increase is indicated as 17.76 tpy. As indicated in the previous discussion of AMP Printing above, regulation 2-2-302 says that offsets are required if emissions of POC are over 15 tons per year, but offsets were not required for this application. If 17.76 tpy is the total emissions from the facility then the 5.82 tpy from this authority to construct should be offset. There is inadequate documentation indicating where the 17.76 tpy of POC is from.

#### 4. Criteria

a. The banking register of emission reduction credits, with an accounting of all transactions of credits, shall be accurate and thorough.

b. ERC evaluations shall contain sufficient documentation of any offsets proposed to be implemented. This documentation should be sufficient to demonstrate that offsets fully comply with any applicable rules, including the NSR Rule and the Banking Rule.

c. The District shall develop a comprehensive policy for implementing and verifying that the mitigations satisfy the criteria of being enforceable, real surplus, quantifiable and permanent.

#### 5. Recommendations

o The District should ensure that evaluations relating to grant of emission reduction credits contain enough documentation so that the reader can easily follow the basis for approval of a particular application.





**Appendix A**  
**Bay Area AQMD Comments On ARB Draft Program Evaluation**





# BAY AREA AIR QUALITY MANAGEMENT DISTRICT

**ALAMEDA COUNTY**

Scott Haggerty  
Greg Harper  
(Chairperson)  
Mary King  
Ben C. Tarver

**CONTRA COSTA COUNTY**

Paul L. Cooper  
Mark DeSaulnier  
Gayle Uilkema

**MARIN COUNTY**

Harold C. Brown, Jr.

**NAPA COUNTY**

Vince Ferriole

**SAN FRANCISCO COUNTY**

Susan Leal  
Mabel Teng

**SAN MATEO COUNTY**

Jerry Hill  
Michael D. Nevin  
(Vice-Chairperson)

**SANTA CLARA COUNTY**

Randy Attaway  
Don Gage  
Trixie Johnson  
Gillian Moran  
(Secretary)

**SOLANO COUNTY**

William Carroll

**SONOMA COUNTY**

James Harberson  
Patricia Hilligoss

**AIR POLLUTION  
CONTROL OFFICER**

Ellen Garvey

February 27, 1998

James J. Morgester  
Chief, Compliance Division  
California Air Resources Board  
2020 L Street  
Sacramento, CA 95812

Re: Draft Report of Program Evaluation of the Bay Area Air Quality  
Management District

Dear Mr. Morgester:

District staff has completed their review of the draft document, "An Evaluation of The Bay Area Air Quality Management District's Air Pollution Control Program", dated January 1998. This letter is intended to provide a response to the report as requested in your letter of January 9, 1998.

At the outset, I would like to commend the Compliance Division staff for their objective and professional conduct during this program evaluation and during the preparation of the draft report. The District staff finds this review to be extremely valuable both in terms of looking at the effectiveness of various programs, and in furthering a cooperative, productive partnership between our two agencies.

Staff generally agrees with the findings in the report and is in the process of developing a detailed action plan to deal with the report recommendations once they become final. As your staff learned during their evaluation, District staff was already in the process of addressing many of the issues raised by your staff. While we are pleased with the progress we have made, we agree that further improvement is feasible and would result from the application of additional resources.





February 27, 1998

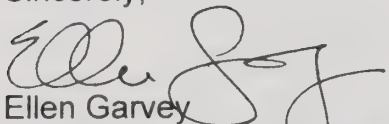
Since the program evaluation was conducted, between March and May of 1997, District staff has changed and will likely continue to change as the result of the many demands placed on District resources. I have enclosed a fiscal year 1997-1998 Organization Chart for your information, and you will note that the numbers of inspectors and evaluating engineers has declined. We have had an individual assigned as "Best Available Control Technology Coordinator" in the Permit Services Division for about three years. We also look forward to improvements in the management of data and records. Again, these improvements are dependent on obtaining additional resources. We do appreciate your acknowledgment of the systems we have created.

The issue of penalties is one that continues to be a priority of mine, as well as the Board of Directors. A review of current practices and proposed enhancements is being jointly developed between the District Counsel's Office and the Compliance and Enforcement Division. As you know, this was a major issue in the recently issued USEPA Inspector General Audit of Region IX. This too, will be addressed in the action plan being developed by Counsel and staff.

We hope to have the action plan complete within the next 90 days, and would be pleased to make it available to you upon request.

Again, let me thank you and your staff for an objective, cooperative evaluation. We look forward to your Final Report. If you require any additional information, please feel free to contact Jim Guthrie, Director of Compliance and Enforcement at (415) 749-4787.

Sincerely,

  
Ellen Garvey  
Air Pollution Control Officer

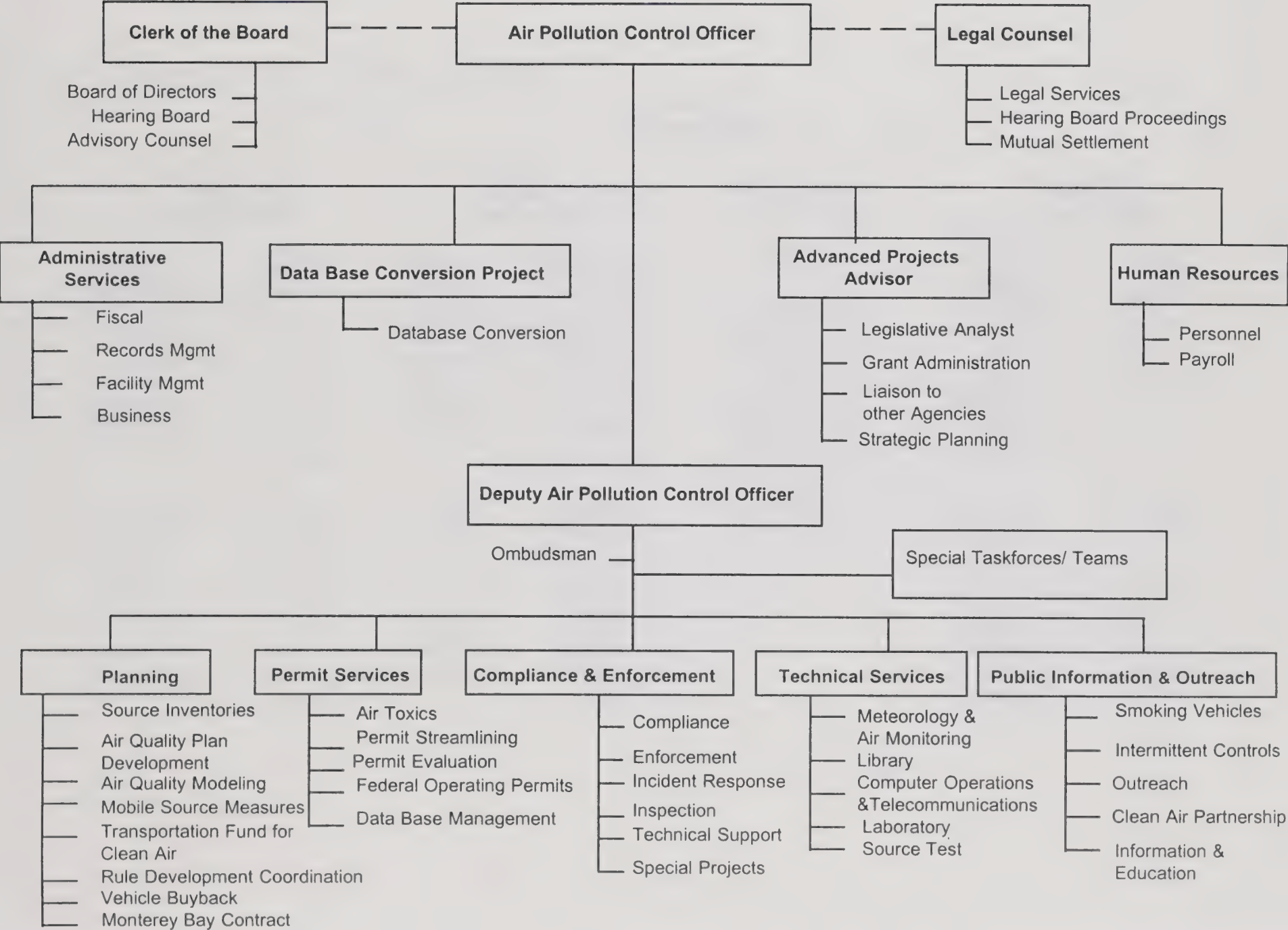
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Enclosure





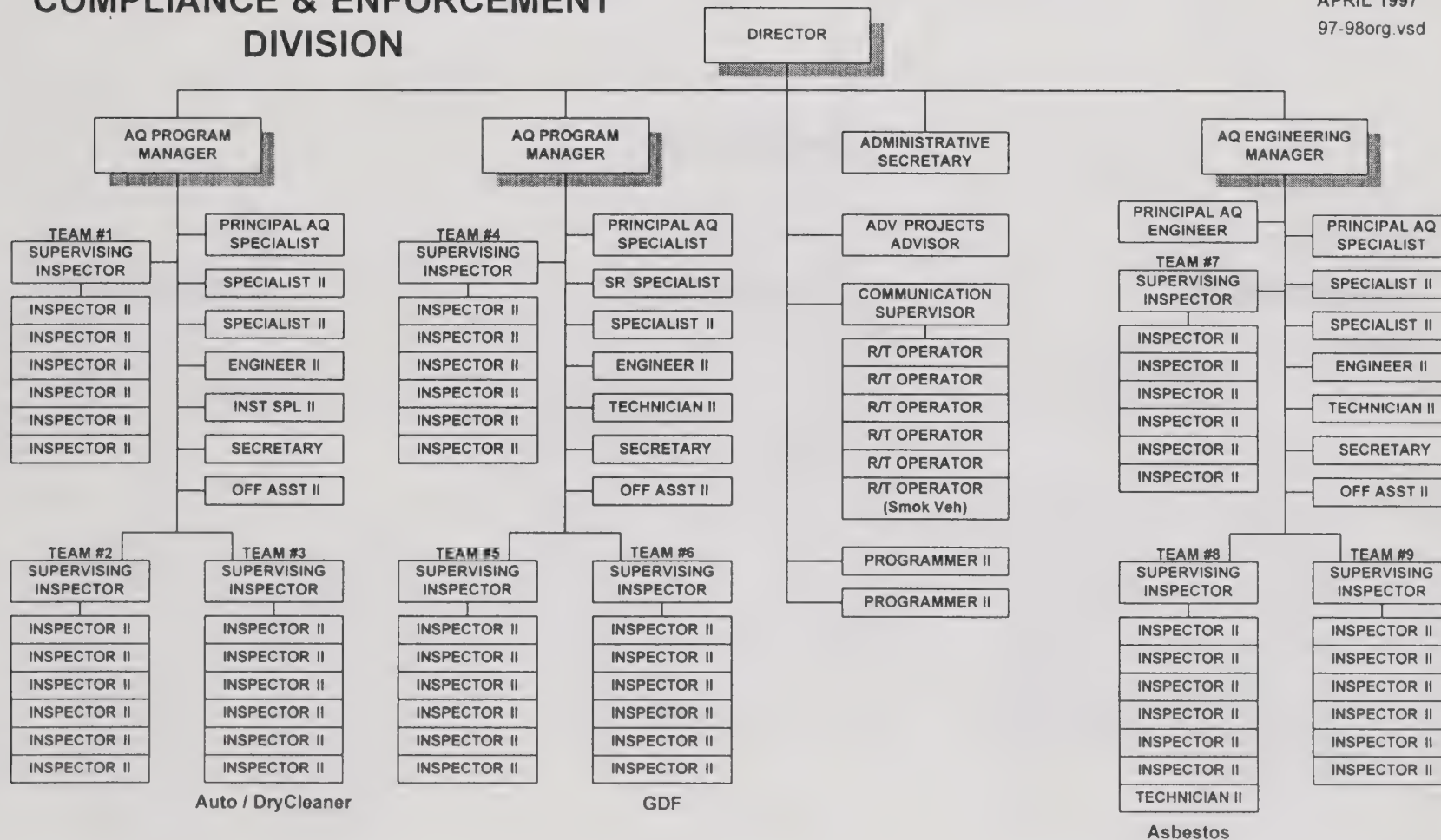
BAAQMD ORGANIZATIONAL CHART - by Programs





# COMPLIANCE & ENFORCEMENT DIVISION

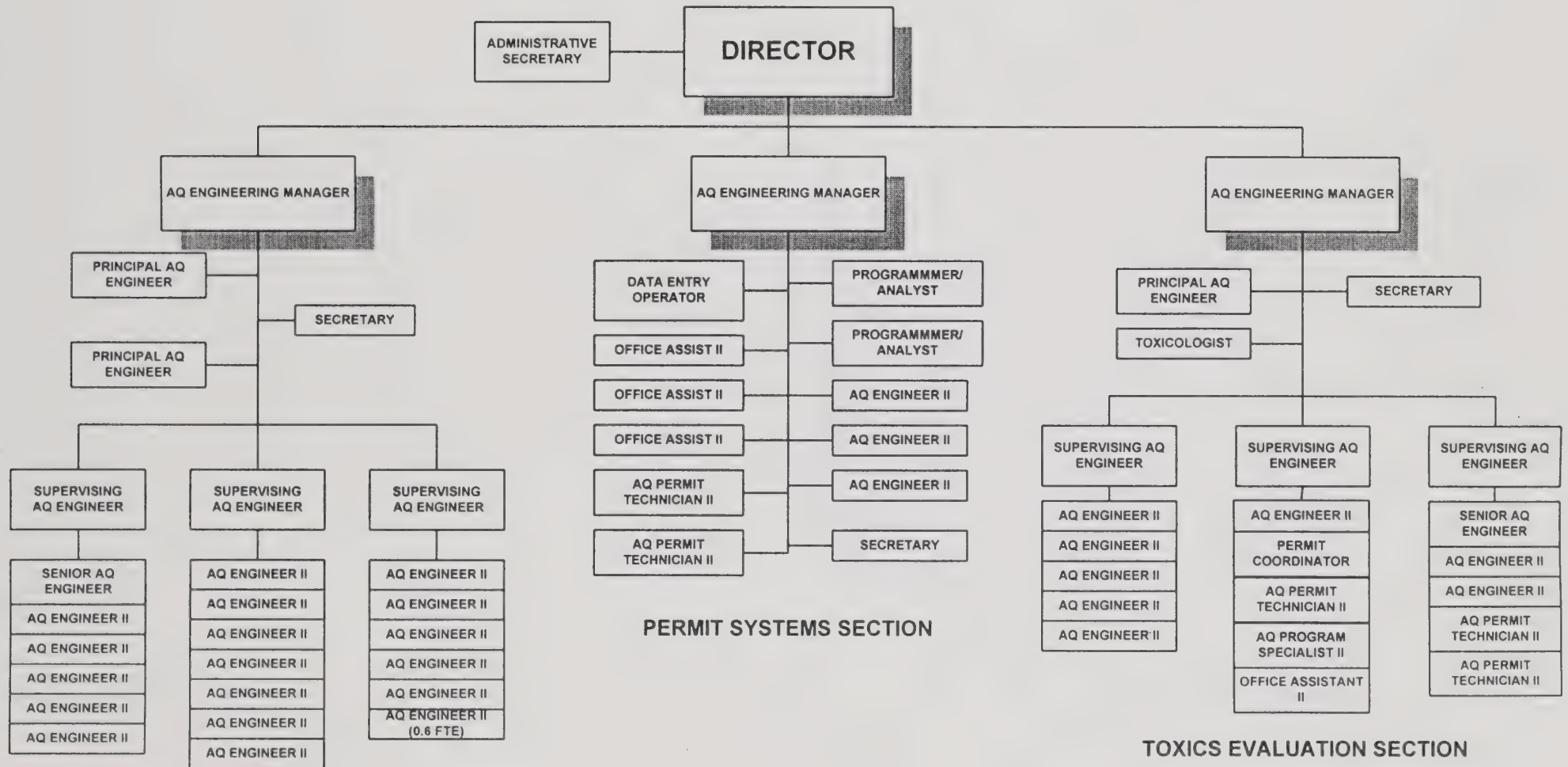
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# PERMIT SERVICES DIVISION







**Appendix B-2-1**  
**Retail Gasoline Dispensing Facilities**



## **Compliance Rates for Retail Gasoline Dispensing Facilities In The Bay Area AQMD**

**Total Number of Facilities Inspected** = 66

### **Total Violation Rate - Phase I (All Tanks)**

Total Number of Tanks Inspected (a) = 191

Total Number of Tanks In Violation (b) = 30

Total Violation Rate (b/a) = **16%**

### **Total Violation Rate - Phase II (Booted Only)**

Total Number of Nozzles Inspected (a) = 967

Total Number of Nozzles In Violation (b) = 186

Total Violation Rate (b/a) = **19%**

### **Emissions Violation Rate - Phase II (Booted Only)**

Total Number of Nozzles Inspected (a) = 967

Total Number of Nozzles with Emissions Violations (b) = 139

Emission Violation Rate (b/a) = **14%**

### **Non-Emissions Violation Rate - Phase II (Booted Only)**

Total Violation Rate (19%) minus Emission Violation Rate (14%) = **5%**



**Retail Gasoline Dispensing Facilities  
Inspection Results**

Facility(G #)	Tanks (Total)	Tanks (Violations)	Nozzles (Total)	Nozzles (Violations)
Ramos Oil (7515) 744 N Texas Street Fairfield, CA 94533	(2) 21,000 Gallon Above Ground	None.	(4) Booted	None. Source Data Sheet (SDS) submitted to Permit Services Division (PSD) to change Permit To Operate (PTO) from 6 to 4 nozzles.
Unocal (9389) 115 Sunset Center Suisun City, CA 94585	(2) 10,000 Gallon	None.	(8) Bootless Gilbarco No A/L Test	Pump 3 Tagged Out-of-Order (TAG): missing ring-rivet-spring. NTC # 35371: failure to post current PTO.
Cathy's Cheaper (4686) 4155 Suisun Valley Road Suisun City, CA 94585	(2)	None.	(8) Booted	Pump 8 Minor Defect (MD): cracked gas hose. SDS submitted for a change of ownership. <i>PTO valid but not posted (No NTC issued).</i>
Hank's Cheaper (5133) 3012 Howe Road Martinez, CA 94553	(3) 12,000 Gallon	None.	(20) Booted	Pump 1 (2) MD: damaged face seal & no hold open latch. Pump 2 MD: wet nozzle. Pump 3 MD: damaged face seal. Pump 14 MD: slit bellow. Pump 16 MD: wet swivels. Pump 17 MD: slit bellow.
Unocal (8603) 2501 N Main Street Walnut Creek, CA 94596	(2)	None.	(8) Booted	Pump 5 MD: damaged face seal. Pump 7 TAG: missing liquid removal device. SDS submitted for a change of ownership. <i>PTO valid but not posted (No NTC issued).</i>

Facility(G #)	Tanks (Total)	Tanks (Violations)	Nozzles (Total)	Nozzles (Violations)
Concord Auto Service (9677) 4300 Clayton Road Concord, CA	(3) 12,8,6,000 Gallon	None.	(24) Booted	Pump 1/89 MD: hose on ground. Pump 1/92 MD: hose on ground. Pump 1/92 TAG: leaking hose. Pump 1/87 MD: hose on ground. Pump 2/87 MD: hose on ground. Pump 2/92 MD: hose on ground. Pump 3/89 MD: hose on ground. Pump 3/92 MD: hose on ground. Pump 3/92 TAG: missing vapor check valve. Pump 3/87 MD: hose on ground. Pump 4/87 (2) MD: damaged face seal & hose on ground. Pump 4/92 (2) MD: missing hold open latch & hose on ground. Pump 4/89 MD: hose on ground. Pump 5/92 (2) MD: damaged face seal & missing hold open latch. Pump 5/92 TAG: missing vapor check valve. Pump 5/87 MD: hose on ground. Pump 6/87 MD: hose on ground. Pump 6/92 MD: hose on ground. Pump 6/89 MD: hose on ground. Pump 7/87 MD: hose on ground. Pump 8/87 MD: hose on ground. Pump 8/92 MD: hose on ground. Pump 8/89 MD: hose on ground. NTC # 35372: failing to post current PTO.

Facility(G #)	Tanks (Total)	Tanks (Violations)	Nozzles (Total)	Nozzles (Violations)
Chevron (1689) 2860 Crow Canyon Road San Ramon, CA 94583	(4) 10,000 Gallon	None.	(42) Booted	Pump 1/87 MD: damaged face seal. Pump 1/87 TAG: missing liq removal device. Pump 2/87 TAG: reversed liq removal device. Pump 7/87 MD: handle interlock. Pump 7/89 TAG: missing liq removal device. Pump 9/89 MD: torn hose. Pump 10/87 (2) MD: damaged face seal & torn hose. Pump 11/92 MD: handle-interlock. Pump 13/89 MD: hose loop requirement.
Chevron (8334) 7007 San Ramon Valley Rd Dublin, CA 94568	(3) 12,000 Gallon	None.	(36) Booted	Pump 2/89 MD: no hold open latch. Pump 3/89 MD: torn hose. Pump 3/87 MD: slit bellow. Pump 5/92 MD: loose bellow. Pump 5/89 MD: torn hose. Pump 9/89 MD: torn hose. Pump 9/87 MD: damaged face seal. Pump 11/89 MD: torn hose.
ARCO (6204) 4449 Central Place Suisun City, CA 94585	(3) 10,000 Gallon	87 Tank VN # 30669: defective coaxial vapor poppet. 89 Tank NTC # 35373: gas in sump. 92 Tank NTC # 35373: gas in sump.	(16) Booted	Pump 1/87 MD: torn hose. Pump 3/89 MD: improperly installed breakaway. Pump 9/87 MD: hole in bellow. Pump 15 MD: leaking modulating valve.

Facility(G #)	Tanks (Total)	Tanks (Violations)	Nozzles (Total)	Nozzles (Violations)
Unocal (4629) 134 Pittman Road Suisun City, CA 94585	(2) 12,000 Gallon	None.	(12) Booted	Pump 1 (2) MD: hole in bellow & damaged face seal. Pump 5 MD: damaged face seal. Pump 6 MD: reversed breakaway & vapor check valve grommet. Pump 7 (3) MD: hole in bellow, damaged face seal & kinked hose. Pump 7 TAG: missing ring-rivet-spring. Pump 10 TAG: missing vapor check valve. Pump 11 MD: vapor check valve grommet. Pump 12 MD: damaged face seal.
Chevron (4677) 4490 Central Way Suisun City, CA 94585	(4) 10,000 Gallon	None. SDS submitted to indicate two-point vapor recovery system on PTO.	(25) Booted	Pump 1/89 TAG: missing liq removal device. Pump 5/92 MD: kinked hose.
BP (8102) 1247 Texas Street Fairfield, CA	GDF Dismantled			
Unocal (7273) 1400 Powell Street Emeryville, CA 94608	(2)	92 Tank MD: inoperable fill cap cam lock.	(12) Booted	Pump 1 (2) MD: damaged face seal & nozzle end oil stains. Pump 2 (2) MD: damaged face seal & frozen pump swivel. Pump 3 (3) MD: slit bellow, hose loop requirement & weak retractor. Pump 4 TAG: > 25% of face seal damaged. Pump 5 (2) MD: damaged face seal & frozen pump swivel. Pump 9 MD: loose screw at dispenser oil transmitter.



Facility(G #)	Tanks (Total)	Tanks (Violations)	Nozzles (Total)	Nozzles (Violations)
Hank Schram's Fuel Dock (140) 3310 Powell Street Emeryville, CA 94608	(1) 5,000 Gallon	87 Tank NTC # 33231: short fill tube.	(2) Booted	Marine loading exempt from phase II vapor recovery requirements.
ARCO (8887) 1001 San Pablo Avenue Albany, CA 94706	(4)	89 Tank NTC # 33233: broken O ring gasket between fill pipe and adaptor. 87 Tank NTC # 33233: broken fill cap handle.	(16) Booted	Pump 3 MD: weak retractor. Pump 5 MD: weak retractor. Pump 10 (2) MD: slit bellow & damaged face seal. Pump 13 MD: slit bellow. Pump 15 (2) MD: hose loop requirement & weak retractor. Pump 16 MD: hose loop requirement.
Chevron (8416) 15900 Hesperian Blvd. San Lorenzo, CA 94580	(3)	None.	(18) Booted	Pump 1/87 MD: reversed breakaway. Pump 1/89 (2) MD: loose bellow & damaged face seal. Pump 1/92 MD: loose bellow. Pump 2/92 TAG: reversed liq removal device. Pump 2/89 MD: loose bellow. Pump 2/87 MD: reversed breakaway. Pump 3/87 MD: loose bellow. Pump 3/89 MD: loose bellow. Pump 3/92 MD: loose bellow. Pump 4/92 MD: loose bellow. Pump 4/89 MD: loose bellow. Pump 5/87 MD: loose bellow. Pump 5/89 MD: loose bellow. Pump 5/92 MD: loose bellow. Pump 5/92 TAG: reversed liq removal device. Pump 6/92 MD: weak retractor. Pump 6/89 MD: loose bellow. Pump 6/87 MD: slit bellow.

Facility(G #)	Tanks (Total)	Tanks (Violations)	Nozzles (Total)	Nozzles (Violations)
ARCO (9338) 17601 Hesperian Blvd. San Lorenzo, CA 94580	(3)	None.	(16) Booted	Pump 1 TAG: torn hose. Pump 6 (2) MD: face seal & weak retractor. Pump 7 MD: slit bellow. Pump 8 TAG: torn hose. Pump 11 MD: slit bellow. Pump 12 TAG: torn hose. Pump 15 TAG: torn hose.
Exxon (7559) 2300 San Pablo Avenue Berkeley, CA	Station Closed			
Shell (5755) 755 2nd Street San Rafael, CA 94901	(4) 8,000 Gallon	None.	(30) Bootless Gilbarco No A/L Test	Pump 3/89 MD: vapor holes partly blocked. Pump 7/89 MD: vapor holes partly blocked. Pump 8/89 MD: vapor holes partly blocked. Pump 9/87 MD: vapor holes partly blocked.
Touchless Car Wash (9000) 1515 2nd Street San Rafael, CA 94901	(3) 12,000 Gallon	None.	(8) Bootless Gilbarco No A/L Test	Pump 4 MD: vapor holes partly blocked. NTC # 35348: key for dispenser not available.
ARCO (9704) 1401 2nd Street San Rafael, CA 94901	(3) 12,000 Gallon	None.	(20) Booted	Pump 1/87 MD: hose drains uphill. Pump 5/92 MD: damaged face seal. Pump 7/87 TAG: >25% face seal damaged. Pump 11/89 MD: hose loop requirement. Pump 14/89 (2) MD: torn hose/drains uphill. Pump 20/87 MD: hose drains uphill.
Chevron (9064) 1320 2nd Street San Rafael, CA 94901	(3) 7,7,5,000 Gallon	89 Tank NTC # 35349: gas in sump.	(24) Booted	None.

Facility(G #)	Tanks (Total)	Tanks (Violations)	Nozzles (Total)	Nozzles (Violations)
Union (9226) 1125 Lincoln Avenue San Rafael, CA 94901	(3) 9,000 Gallon	92 Tank MD: defective vapor cap gasket.	(30) Booted	Pump 1/87 (2) MD: hose on ground/island & not snug to dispenser. Pump 1/92 MD: hose not snug to dispenser. Pump 3/89 TAG: missing liq removal device. Pump 3/92 TAG: missing liq removal device. Pump 3/92 MD: hose not snug to dispenser. Pump 4/92 MD: hose not snug to dispenser. Pump 4/89 MD: hose not snug to dispenser. Pump 4/87 MD: hose not snug to dispenser. Pump 6/89 MD: hose not snug to dispenser. Pump 7/89 TAG: missing liq removal device. Pump 7/92 MD: hose not snug to dispenser.
Chevron (8443) 475 3rd Street San Rafael, CA 94901	(3)	None.	(15) Booted	<i>Pump 5 frozen nozzle &amp; pump end swivel. Pump 9 frozen pump end swivel. No Minor Defects issued for these violations.</i>
Super Cheaper (8920) 425 Laurel Street Vallejo, CA 94590	(3)	87 Tank VN # 30157: 3.75" gas in sump.	(18) Booted	Pump 1 MD: damaged face seal. Pump 12 MD: damaged face seal.
Quik Stop (4772) 1921 Spring Road Vallejo, CA 94591	(2)	87 Tank NTC # 35351: .25" gas in sump	(4) Booted	Pump 2/87 MD: flattened hose.
BP (8093) 101 N McDowell Blvd Petaluma, CA 94952	(4) 6,6,6,10,000 Gallon	89 Tank VN # 30159: fill cap gasket missing 92 Tank MD: vapor cap gasket defective	(12) Booted	Pump 2/92 MD: broken interlock Pump 4/87 MD: torn hose.
Gasco (9556) 415 Petaluma Blvd Petaluma, CA 94952	(2)	92 Tank MD: vapor poppet gasket missing	(7) Booted	None. Station not selling gas.

Facility(G #)	Tanks (Total)	Tanks (Violations)	Nozzles (Total)	Nozzles (Violations)
Strawberry Chevron (9692) Delicatessen 580 Redwood Highway Mill Valley, CA 94941	(3)	87 Tank NTC # 35352: gas in sump. 92 Tank NTC # 35352: gas in sump.	(24) Booted	Pump 1/92 MD: vapor return line obstruction. Pump 5/89 MD: vapor return line obstruction. Pump 7/87 (3) MD: slit bellow, damaged face seal, vapor return line obstruction. Pump 11/92 MD: slit bellow. Pump 12/87 MD: slit bellow.
Chevron (9421) 512 El Camino Real San Bruno, CA 94066	(3) 6,000 Gallon	None.	(12) Booted	Pump 1/92 MD: weak retractor. Pump 2/92 TAG: partially detached face seal. Pump 2/92 MD: no hold open latch. Pump 3/89 MD: no hold open latch. Pump 6/87 (2) MD: hose loop requirement & no hold open latch. Pump 7/92 MD: damaged face seal. Pump 9/89 TAG & VN # 28753: hose tear. Pump 11/87 MD: damaged face seal. Pump 12/87 TAG & VN # 29753: hose tear.
Chevron (7321) 300 So. Airport Blvd S. San Francisco, CA 94080	(3)	None.	(24) Booted	Pump 6 MD: damaged face seal.
Unocal (8956) 901 Airport Blvd S. San Francisco, CA 94080	(2)	None.	(24) Booted	Pump 2/92 MD: damaged face seal. Pump 4/87 MD: damaged face seal. Pump 4/92 MD: damaged face seal. Pump 8/89 MD: damaged face seal.
Exxon (8270) 800 El Camino Real San Bruno, CA	Closed for renovation (A/C 24650)			



Facility(G #)	Tanks (Total)	Tanks (Violations)	Nozzles (Total)	Nozzles (Violations)
Shell (8506) 123 Linden Avenue S. San Francisco, CA 94080	(3)	None.	(24) Booted	Pump 1/89 MD: damaged face seal. Pump 1/87 MD: torn bellow. Pump 3/87 MD: damaged face seal. Pump 3/89 MD: damaged face seal. Pump 5/89 MD: damaged face seal.
Chevron (2809) 990 Serramonte Blvd Colma, CA 94014	(3)	None.	(24) Booted	None.
Unocal (9263) 137 Serramonte Blvd Daly City, CA 94015	(2)	None.	(16) Booted	Pump 7 MD: damaged face seal. Pump 10 MD: damaged face seal.
Shell (9538) 390 Hickey Blvd Daly City, CA 94015	(3)	None.	(30) Booted	None.
Shell (6713) 4698 Callan Blvd Daly City, CA 94014	(3)	None.	(24) Booted	None.
BP - Now Chevron (8132) 700 Hickey Blvd Pacifica, CA 94044	(3)	None.	(24) Booted	Pump 3/89 MD: damaged face seal. Pump 4/87 MD: hole in bellow. Pump 6/92 MD: damaged face seal.
Shell (8831) 879 Hickey Blvd Pacifica, CA 94044	(3)	None.	(24) Booted	None.
Canadian American (9659) 1898 Van Ness Avenue San Francisco, CA 94109	(3)	None.	(8) Booted	None.

Facility(G #)	Tanks (Total)	Tanks (Violations)	Nozzles (Total)	Nozzles (Violations)
Chevron (2696) 1501 Van Ness Avenue San Francisco, CA 94109	(4)	None.	(30) Booted	None.
Golden Gate Park (8759) 1200 19th Avenue San Francisco, CA 94122	(3)	None.	(24) Booted	None.
Shell (8811) 3035 Geary Blvd San Francisco, CA 94118	(4) 3 gasoline 1 methanol	None.	(25) Booted	Pump 8/92 TAG: missing ring-rivet-spring. Pump 8/89 TAG: missing ring-rivet-spring. Pump 8/87 TAG: missing ring-rivet-spring. Pump 9 MD: hose loop requirement.
Chevron (2155) 1288 19th Avenue San Francisco, CA 94122	(3)	None.	(30) Booted	Pump 2/87 MD: damaged face seal. Pump 6/87 MD: damaged face seal. Pump 9/87 MD: loose bellow.
Shell (2167) 2399 19th Avenue San Francisco, CA 94116	(3)	None.	(24) Booted	None.
Chevron (5795) 2301 19th Avenue San Francisco, CA 94115	(3)	89 Tank NTC 33681: missing vapor cap.	(18) Booted	Pump 3/92 MD: damaged face seal. Pump 6/92 MD: loose bellow.
Chevron (3645) 45 W El Camino Real Mountain View, CA 94040	(3)	None.	(24) Booted	Pump 5/92 MD: vapor line tear. Pump 6/92 MD: nozzle leak. Pump 8/92 MD: nozzle leak.
Exxon (8907) 59 W. El Camino Real Mountain View, CA 94040	(3)	None.	(24) Bootless Gilbarco No A/L Test	None.

Facility(G #)	Tanks (Total)	Tanks (Violations)	Nozzles (Total)	Nozzles (Violations)
Unocal (6997) 101 E El Camino Real Mountain View, CA 94040	(3)	None.	(12) Booted	Pump 3 MD: damaged face seal. Pump 4 MD: damaged face seal. Pump 4 TAG: reversed liq removal device. Pump 7 MD: kinked hose. Pump 8 (2) MD: damaged face seal & kinked hose. NTC # 33271: failure to post permit to operate.
Shell (6454) 790 E El Camino Real Mountain View, CA 94040	(3)	87 Tank NTC # 33272: gas in sump. 92 Tank NTC # 33272: gas in sump	(36) Booted	Pump 10/89 TAG: missing ring-rivet-spring.
Exxon (7535) 3305 El Camino Real Santa Clara, CA 95051	(3)	None.	(18) Bootless Gilbarco No A/L Test	Pump 2/89 TAG: missing ring-rivet-spring. VN # 28191: converted to bootless nozzles without obtaining an A/C or PTO.
Unocal (9606) 3499 El Camino Real Santa Clara, CA 95050	(2)	None.	(7) Booted	Pump 2/89 MD: no hold open latch.
Exxon (9345) 3725 El Camino Real Santa Clara, CA 95050	(3)	None.	(24) Bootless Gilbarco No A/L Test	Pump 1/87 TAG: vapor hose reversed. Pump 4/89 TAG: vapor hose reversed. Pump 6/87 TAG: vapor hose reversed. Pump 8/87 TAG: vapor hose reversed.
ARCO (7246) 2320 El Camino Real Santa Clara, CA 95050	(2)	92 Tank NTC: missing vapor cap gasket.	(16) Booted	Pump 1/87 MD: nicked vapor hose. Pump 2/87 MD: damaged face seal. Pump 4/92 MD: damaged face seal. Pump 10/87 MD: loose bellow. Pump 13/92 TAG: slit bellow. Pump 14/89 MD: nozzle leak. Pump 15/87 (2) MD: damaged face seal & nozzle leak.

Facility(G #)	Tanks (Total)	Tanks (Violations)	Nozzles (Total)	Nozzles (Violations)
Shell (4501) 905 E. El Camino Real Sunnyvale, CA 94087	(3)	89 Tank VN # 28194: missing fill cap gasket	(24) Booted	Pump 1/87 MD: kinked hose. Pump 2/89 MD: damaged face seal. Pump 2/92 MD: damaged face seal. Pump 2/87 MD: hole in bellow. Pump 5/87 MD: damaged face seal. Pump 5/89 MD: weak retractor. Pump 5/92 MD: frozen nozzle swivel. Pump 8/87 MD: weak retractor.
Exxon (5229) 1005 W. El Camino Real Sunnyvale, CA 94087	(3)	None.	(24) Bootless Gilbarco No A/L Test	Pump 3/87 MD: torn hose.
Unocal (3526) 330 S. San Antonio Rd Los Altos, CA 94022	(3)	87 Tank NTC # 33277: gas in sump.	(8) Booted	Pump 2/87 MD: hose loop requirement. Pump 5/87 MD: hose loop requirement. Pump 8/89 MD: hose loop requirement.
Exxon (5736) 696 W. El Camino Real Sunnyvale, CA 94087	(3)	89 Tank NTC # 33276: gas in sump. 92 Tank NTC # 33276: gas in sump.	(24) Bootless Gilbarco No A/L Test	Pump 5/92 MD: kinked hose. Pump 6/92 MD: kinked hose.
Chevron (4377) 3740 El Camino Real Santa Clara, CA 95051	(3)	87 Tank NTC # 33273: gas in sump.	(24) Booted	Pump 3/87 TAG: reversed liq removal device. Pump 4/87 MD: damaged face seal. <i>Pump 3/92 &amp; 1/87: kinked hoses but no MD.</i>
BP (4475) 1198 W. El Camino Sunnyvale, CA 94087	(3)	92 Tank VN # 28192: 5" gas in sump. 92 Tank NTC # 33274: missing coaxial fill tube gasket. 87 Tank NTC # 33274: missing coaxial fill tube gasket.	(18) Booted	Pump 1/87 MD: damaged face seal. Pump 3/92 MD: damaged face seal. Pump 3/89 MD: damaged face seal. Pump 4/87 MD: damaged face seal.



Facility(G #)	Tanks (Total)	Tanks (Violations)	Nozzles (Total)	Nozzles (Violations)
Shell (144) 1800 Powell Street Emeryville, CA 94608	(3)	92 Tank VN # 35144: gas in sump	(27) Bootless Wayne Vac A/L Test	Pump 1,4,5,6,7,10,11: out of A/L range. Pump 5/89 MD: loose spout. Pump 5/89 TAG: ring-rivet-spring. Pump 5/87 TAG & VN 28474: leaking nozzle. Pump 6/87 TAG: ring-rivet-spring. Pump 10/92 TAG & VN 28474: leaking nozzle Pump 11/87 TAG: ring-rivet-spring. Pump 11/89 MD: loose spout. Pump 11/92 MD: loose spout.
San Pablo Mini Mart (6992) 1580 San Pablo Berkeley, CA 94702	(3)	87 Tank VN # 28475: excess gas in sump. 92 Tank NTC # 35145: gas in sump.	(24) Bootless Gilbarco A/L Test	Pump 1: out of A/L range. NTC # 35145: missing nozzle open signs.
BP (9289) 1700 Powell Street Emeryville, CA 94608	(3)	None.	(24) Bootless Gilbarco A/L Test	All pumps tested within A/L range. Pump 1 TAG: spout out-of-round.
Shell (5833) 1250 University Avenue Berkeley, CA 94702	(3) 10,000 Gallon	None.	(18) Bootless Wayne Vac A/L Test	Pump 1,4,5: out of A/L range. Pump 1/87 TAG: leaking nozzle.
Shell (7034) 1200 Ashby Berkeley, CA 94702	(3)	None.	(18) Bootless Wayne Vac A/L Test	Pump 4,5,6: out of A/L range. Pump 5/92 MD: spout out-of-round. Pump 2/87 MD: spout out-of-round. Pump 4/89 MD: spout out-of-round. Pump 1/89 MD: spout out-of-round. Pump 3/87 MD: spout out-of-round. Pump 3/92 MD: spout out-of-round. Pump 4/87 MD: spout out-of-round.

Facility(G #)	Tanks (Total)	Tanks (Violations)	Nozzles (Total)	Nozzles (Violations)
Chevron (1464) 2695 Pinole Valley Road Pinole, CA 94564	(3) 12,000 Gallon	None.	(24) Bootless Wayne Vac A/L Test	Pumps 3,4,6,7,8: out of A/L range.
Exxon (7499) 2401 Appian Way Pinole, CA 94564	(3)	None.	(24) Bootless Gilbarco A/L Test	All pumps tested within A/L range. Pump 2/87 TAG: ring-rivet-spring.
Exxon (9581) 4141 Alhambra Martinez, CA 94533	(3) 10,8,12,000 Gallon	None.	(18) Bootless Gilbarco A/L Test	Pump 1: out of A/L range.

## Bootless Phase II Vapor Recovery Systems Inspected Without A/L Testing

Facility (ID #)	Address	Comments
Union Oil (9398)	115 Sunset Center, Suisun City	8 nozzles. 1 missing ring-rivet-spring (TAG). Permit To Operate not posted (NTC # 35371).
Exxon (8907)	59 West El Camino Real, Mountain View	24 nozzles. No defects.
Exxon (7535)	3305 El Camino Real, Santa Clara	18 nozzles. Converted to a bootless station without obtaining an A/C or P/O (VN # 28191). 1 missing ring-rivet-spring (TAG).
Exxon (9345)	3725 El Camino Real, Santa Clara	24 nozzles. 4 coaxial hoses reversed (4 TAGS).
Exxon (5736)	696 El Camino Real, Sunnyvale	24 nozzles. 89/92 Tanks: gas in sump (NTC # 33276.) 2 kinked vapor hoses (2 MDs).
Exxon (5229)	1005 West El Camino Real, Sunnyvale	24 nozzles. 1 torn vapor hose (MD).
Touchless Car Wash (9000)	1515 2nd Street, San Rafael	8 nozzles. First row of vapor return holes partially blocked (MD). No key to dispenser cabinet (NTC # 35348).
Shell (5755)	755 2nd Street, San Rafael	30 nozzles. First row of vapor return holes partially blocked (4 MDs).

MD = Minor Defect    TAG = Tagged Out-of-Order

### Stations Not Inspected By ARB

Facility (ID #)	Address	Comments
Exxon (7559)	2300 San Pablo Avenue, Berkeley	Closed.
Berkeley Forge & Tool (5977)	1331 Eastshore Highway, Berkeley	Closed.
Strawberry Chevron Car Wash (9692)	580 Redwood Highway, Mountain View	Inspected by BAAQMD without ARB.
Exxon (8270)	800 El Camino Real, San Bruno	Closed for renovation (A/C 24650).
BP (8102)	1247 Texas Street, Fairfield	Station removed.





**Appendix B-2-2**  
**Non-Retail Gasoline Dispensing Facilities**



## **Compliance Rates for Non-Retail Gasoline Dispensing Facilities In The Bay Area AQMD**

**Total Number of Facilities Inspected** = 22

### **Total Violation Rate - Phase I (All Tanks)**

Total Number of Tanks Inspected (a) = 26

Total Number of Tanks In Violation (b) = 13

Total Violation Rate (b/a) = **50%**

### **Total Violation Rate - Phase II (Booted Only)**

Total Number of Nozzles Inspected (a) = 42

Total Number of Nozzles In Violation (b) = 30

Total Violation Rate (b/a) = **71%**

### **Emissions Violation Rate - Phase II (Booted Only)**

Total Number of Nozzles Inspected (a) = 42

Total Number of Nozzles with Emissions Violations (b) = 20

Emission Violation Rate (b/a) = **48%**

### **Non-Emissions Violation Rate - Phase II (Booted Only)**

Total Violation Rate (71%) minus Emission Violation Rate (48%) = **23%**





**Non-Retail Gasoline Dispensing Facilities  
Inspection Results**

Facility (G #)	Tanks (Total)	Tanks (Violations)	Nozzles (Total)	Nozzles (Violations)
Watergate Tower (6281) 2200 Powell Street Emeryville, CA 94608	(2)	None.	(2) Booted	Pump 1/87 (3) Minor Defect (MD): weak retractor, nozzle end oil stains, frozen nozzle end swivel. Pump 2/87 (2) MD: nozzle end oil stains and frozen nozzle end swivel. <i>Pumps 1 &amp; 2 had improperly installed vapor hoses but no MD issued.</i>
Clementine Equip (8915) 1025 E Shore Highway Albany, CA 94706	(1) 1,000 Gallon	None.	(1) Booted	Pump 1/87 (2) MD: damaged face seal & weak retractor. Pump 1/87 NTC # 33232: coaxial hose too long.
Berkeley Forge & Tool (5977) 1331 Eastshore Highway Berkeley, CA 94710	GDF Dismantled			
Budget Rent-A-Car (5917) 121 98th Avenue Oakland, CA 94603	(2)	87 Tank VN # 29496: gas in sump.	(8) Booted	Pump 3/87 MD: hose loop requirement. Pump 3/87 Tagged Out-of-Order (TAG): missing vapor check valve. Pump 4/87 (2) MD: loose bellow & hose loop requirement. Pump 5/87 TAG: missing vapor check valve. Pump 7/87 MD: loose bellow. Pump 8/87 (2) MD: slit bellow & loose bellow. <i>No toll-free phone number (NTC not issued).</i>

Facility (G #)	Tanks (Total)	Tanks (Violations)	Nozzles (Total)	Nozzles (Violations)
Alamo Rent-A-Car (9026) 165 98th Avenue Oakland, CA 94603	(1)	87 Tank VN # 29497: defective coaxial vapor poppet.	(4) Booted	Pump 1/87 (3) MD: loose bellow, hose loop requirement & weak retractor. Pump 2/87 (2) MD: loose bellow & weak retractor. Pump 3/87 MD: weak retractor. Pump 3/87 TAG: slit bellow. Pump 4/87 (2) MD: hose loop requirement & weak retractor. Pump 4/87 TAG: missing bellow. <i>No toll-free phone number (NTC not issued).</i>
California Glass Co. (7045) 155 98th Avenue Oakland, CA 95603	(1) 1,000 Gallon	89 Tank VN # 29498: gas in sump.	(1) Booted	Pump 1/89 MD: loose bellow. Pump 1/89 TAG: torn hose.
US Rentals (8654) 700 98th Avenue Oakland, CA 94603	(1) 1,000 Gallon	87 Tank NTC # 33235: no pressure/vacuum (p/v) valve installed on vent pipe.	(1) Booted	Pump 1/87 (2) MD: hose loop requirement & weak retractor. Pump 1/87 TAG: non-CARB certified hose. Pump 1/87 VN # 30431: no CARB certified phase II vapor recovery system in use.
Lewis Rents (8829) 15470 Hesperian Blvd San Lorenzo, CA 94580	(1) 1,000 Gallon	None.	(1) Booted	Pump 1/87 MD: weak retractor.
County of Solano (6099) 447 Texas Street Fairfield, CA 94533	(1)	None.	(2) Booted	Pump 1/87 MD: hose loop requirement. Pump 2/87 MD: hose loop requirement.
Pacific Bell (5551) 3235 N Texas Street Fairfield, CA 94533	(1) 8,000 Gallon	87 Tank NTC # 35370: tank cap locked - combination to lock not available.	(1) Booted	Pump 1/NTC # 35370: no keys to dispenser cabinet.

Facility (G #)	Tanks (Total)	Tanks (Violations)	Nozzles (Total)	Nozzles (Violations)
Cal Trans (7631) 2019 Texas Street Fairfield, CA 94533	(1) 12,000 Gallon	87 Tank MD: inoperable vapor cap cam lock.	(2) Booted	Pump 1/87 (2) MD: hose loop requirement & vapor check valve. Pump 1/87 (2) TAGS: missing nozzle & pump end swivels. Pump 2/87 MD: hose loop requirement. VN # 30665: No Permit To Operate.
Solano Com. College (6943) 4000 Suisun Valley Road Suisun City, CA 94585	(2) 1,000 Gallon Above Ground	87 Tank MD: check p/v valve operation.	(1) Booted	Pump 1/87 (2) MD: hose loop requirement & repair down slope vapor recovery configuration.
Alby Construction Co (8280) 865 Howe Road Martinez, CA 94553	(1) 8,000 Gallon	87 Tank VN # 30666: no coaxial poppet.	(2) Booted	Pump 1/87 MD: no hold open latch. Pump 2/87 MD: no hold open latch. <i>Pump 3/Diesel MD: no hold open latch. Not included in violation count.</i>
Cresco (6385) 197 Howe Road Martinez, CA 94553	(1) 1,000 Gallon Above Ground	87 Tank VN # 39667: no p/v valve on vent pipe. 87 Tank VN # 39668: no PTO for tank.	(1) Booted	Pump 1/87 (2) MD: damaged face seal & frozen nozzle end swivel. Pump 1/87 TAG: missing retractor. VN # 39668: no PTO for Phase II vapor recovery system.
Ivy Hi-Lift (9470) 1000 Howe Road Martinez, CA 94553	(1) 3,000 Gallon Above Ground	87 Tank MD: defective vapor poppet gasket.	(1) Booted	Pump 1/87 MD: reversed breakaway.
Green Valley Country (8302) 35 Country Club Drive Suisun City, CA 94585	(1) 500 Gallon Above Ground	None.	(1) Booted	Pump 1/87 (2) MD: damaged face seal & torn hose.
CHP (7794) 1551 Benicia Road Vallejo, CA 94591	(1) 12,000 Gallon	87 Tank MD: defective fill cap gasket. 87 Tank NTC # 35350: short fill tube.	(2) Booted	None.



**Appendix B-2-3**  
**Bootless Vapor Recovery**

**Appendix B-2-3**  
**Bootless Vapor Recovery**



**Phase II Defect Rate In Bootless Nozzles  
Air To Liquid Test Results**

Station	V.R. System (EO Number)	V.R. Nozzles Tested	Nozzles Out Of Range	Comments
Shell 1800 Powell Street Emeryville, CA	Wayne Vac * G-70-153-AB	10	(.59-.89) Dispensers 1,4,5,6,7,10,11	92 Tank: gas in sump-VN Pump 5/10: leaking nozzles-VN Pump 5/89,11/89,11/92: loose spouts-MD Pump 5/89,6/87,11/87: missing ring-rivet-springs-MD
BP 1700 Powell Street Emeryville, CA	Gilbarco ** G-70-150-AB	7	0	Pump 1: spout out-of-round-TAG One dispenser found tagged out of order due to computer problems
San Pablo Mini Mart 1580 San Pablo Berkeley, CA	Gilbarco ** G-70-150-AB	7	(.78-.88) Dispenser 1	87 Tank: gas in sump-VN 92 Tank: gas in sump-NTC Missing nozzle open signs-NTC
Shell 1200 Ashby Berkeley, CA	Wayne Vac * G-70-153-AB	6	(.43-.80) Dispensers 4,5,6	Pump 1/89,2/87,3/87,3/92,4/87, 4/89, 5/92: spouts out-of-round- MD
Shell 1250 University Berkeley, CA	Wayne Vac * G-70-150-AB	6	(.29-.88) Dispensers 1,4,5	Pump 1/87: leaking nozzle-TAG
Exxon 2401 Appian way Pinole, CA	Gilbarco ** G-70-150-AB	7	0	Pump 2/87: missing ring-rivet- spring-TAG
Chevron 2695 Pinole Valley Pinole, CA	Wayne Vac * G-70-153-AB	8	(.63-.82) Dispensers 3,4,6,7,8	
Exxon 4141 Alhambra Martinez, CA	Gilbarco ** G-70-150-AB	6	(.72-.74) Dispenser 1	
<b>8 Stations Inspected</b>	<b>2 Types of V.R. Systems</b>	<b>57 Nozzles Tested</b>	<b>20 Nozzles Out of Range</b>	<b>35% A/L Defect Rate</b>

\* Allowable air to liquid range for the Wayne Vac System is .90-1.10 at a fuel flow rate of 7-10 GPM

\*\* Allowable air to liquid range for the Gilbarco Vac System is 1.00-1.25 and cannot be less than 0.90 at a fuel flowrate of at least 8 GPM.





**Appendix B-2-4**  
**Dry Cleaning Operations**



**DRY CLEANER INSPECTION RESULTS SUMMARY**  
**(Legend of Violations on Next Page)**

FACILITY (ID #)	MACHINES INSPECTED	NOV	NTC
Marin (309)	1	(1) Lk Ck, 16 Vlks (1) 45 FT (1) OCL/OWW	(1) 2 RK
Superfine (8131)	1	In Compliance	In Compliance
Kerns & Walker (4301)	1		(1) 2 RK, OWW
Magnificent (9698)	1	(1) OCL	(1) Vlk, RK
Loch Lomond (1439)	1	(1) 13 Vlks, Llk	
Express (7794)	1		(1) 4 RK, 4 Vlks
Star (7172)	1	(1) 20 Vlks, 45 FT	(1) 2 RK
19th Avenue (2669)	1		(1) Vlk
Inter-City (1703)	2	In Compliance	In Compliance
Central (7116)	1	(1) RK, Vlk	
Sunshine (8462)	1	(1) RK	
Priority Express (4643)	1	In Compliance	In Compliance
One-Hr Martinizing (4609)	1		(1) 2 Vlks
Parks (5398)	1	(1) 2 Vlks, RK	
Kerful (4780)	1	(1) 2 Vlks	
Ford (8804)	1	In Compliance	
Gatito (6081)	1	(1) Det (1) OWW	(1) 2 RK, Vlk
Tip Top (8997)	1	(1) Lk Ck, Det, OWW	(1) Tr Cert
Meigs (A 2081)	1	(1) OWW	
Lloyds (A 7450)	1	(1) 3 Vlks, OCL	(1) 2 RK
One-Hr Martinizing (892)	1	(1) 2 RK	(1) 2 Vlks
Four Mile (7216)	1	(1) 2 RK	(1) 2 Vlks
New Economy (7241)	1	(1) 2 RK	(1) Tr Cert
Virginia (4537)	1	(1) Vlk	
Euwell (4460)	1		(1) Tr Cert, Vlk
Flamingo (8855)	1	(1) Vlk	
Cal (2359)	1		(1) Vlk



FACILITY (ID #)	MACHINES INSPECTED	NOV	NTC
ABC (3659)	1	(1) Vlk	
Dollar (3963)	2 (1 In Compliance)		(1) Vlk (1) PU
Fairfield (5693)	1	(1) OCL, OCM	(1) 3 RK
Orchid (10911)	1	(1) OCL, RK	
Lucky's (7931)	1	In Compliance	In Compliance
Family (10895)	1	(1) PTO (1) PC, OWW (1) Det, Tr Cert	(1) 5 RK
Highlander (312)	1	(1) Lk Ck, PC	
Crystal (973)	1	(1) OCM	(1) PPTO
Fashion (8158)	1		(1) 3 RK
Sunrise (5400)	1	In Compliance	In Compliance
Village Oaks (9832)	1	(1) RK	(1) 2 RK
Parc 55 Hotel (4402)	1	(1) Llk	
Comet (3480)	1	(1) RK	
Diamond (10300)	1	In Compliance	In Compliance

### Legend of Dry Cleaning Violations

Vlk	Vapor Leaks
Llk	Liquid Leaks
PC	No Primary Control System
PU	Perchloroethylene Usage Exceeded Permit Condition
45 FT	45 Degree Temperature Not Met
OCL/OCP/OCM/OWW	Open Container of Lint/Perc/Muck/Waste Water
Lk Ck	No Weekly Leak Checks
RK	Recordkeeping
Det	No Leak Detector
Tr Cert	No Training Certificate
PTO	No Permit To Operate
PPTO	Permit To Operate Not Posted

### Dry Cleaner Inspection Results

FACILITY (ID #)	SOURCES	VIOLATION	REGULATION	VN #	NTC #
Marin (309)	1	No Leak Check for (4/97) 16 Vapor Leaks (7 > 200 ppm) Condensor Temperature Above 45 degrees Fahrenheit Open Container of Lint and Open Waste Water Container Condensor Temperature Not Recorded for (4/97) No Perc Delivery Records for (1/16/97 & 1/30/97)	11-16-309.2 11-16-309.2.5 11-16-309.1.1 11-16-309.1.11 11-16-501 11-16-501	30265 30265 30266 30267	35433 35433
Superfine (8131)	1	In Compliance			
Kerns & Walker (4301)	1	Open Waste Water Container No Records of Leak Checks or Condensor Temperature	11-16-309.5 11-16-501		35434 35434
Magnificent (9698)	1	Open Lint Container Vapor Leak (155 ppm) Hazardous Waste Invoice Missing	11-16-309.1.11 11-16-309.5 11-16-501	29299	35435 35435
Loch Lomond (1439)	1	13 Vapor Leaks (5 > 200 ppm) Liquid Leak (16 drops/minute)	11-16-309.2.5 11-16-309.2.5	30901 30901	
Express (7794)	1	4 Vapor Leaks (25-283 ppm) Operation & Maintenance, Condensor Temperature, Leak Check and Hazardous Waste Disposal Records Not Kept	11-16-309.5 11-16-501		35436 35436
Star (7172)	1	20 Vapor Leaks (7 > 200 ppm) Condensor Temperature Above 45 degrees Fahrenheit Condensor Temperature and Leak Check Records Not Kept	11-16-309.2.5 11-16-309.1.1 11-16-501	30902 30902	35437
19th Avenue (2669)	1	Vapor Leak (100 ppm)	11-16-309.2.5		35039
Inter-City (1703)	2	In Compliance			

FACILITY (ID #)	SOURCES	VIOLATION	REGULATION	VN #	NTC #
Central (7116)	1	Vapor Leak (1000 ppm) Leak Check Records Not Kept	11-16-309.2.5 11-16-309.2	29841 29841	
Sunshine (8462)	1	No Leak Records Kept	11-16-309.2	29842	
Priority Express (4643)	1	In Compliance			
One Hour Martinizing San Francisco (4609)	1	2 Vapor Leaks (< 200 ppm)	11-16-309.2.5		35038
Park's (5398)	1	2 Vapor Leaks (> 200 ppm) No Leak Checklist	11-16-309.2.4 11-16-309.1	30679 30679	
Kerful (4780)	1	2 Vapor Leaks (> 200 ppm)	11-16-309.2.4	30680	
Ford (8804)	1	In Compliance			
Gatito (6081)	1	Open Waste Water Container No Leak Detector No Mileage and Leak Detection Records Vapor Leak (110 ppm)	11-16-309.1.10 11-16-309.2.2 11-16-501 11-16-309.2.4	30952 30525	35409 35409
Tip Top (8997)	1	No Leak Inspections No Leak Detector Open Waste Water Container No Trained Operator Certificate	11-16-309.2.1 11-16-309.2.2 11-16-309.1.11 11-16-310.1	30524 30524 30524	35408
Meigs (A 2081)	1	Open Waste Water Container	11-16-309.1.11	30951	
Lloyd's (A 7450)	1	3 Vapor Leaks (55,110,1100 ppm) Open Container of Lint No Mileage and Leak Detection Records	11-16-309.2.4 11-16-309.1.8 11-16-501	30954 30954	35410
One Hour Martinizing Berkeley (892)	1	No Leak or Repair Checklists 2 Vapor Leaks (< 100 ppm)	11-16-309.2 11-16-309.2.4	30780	35102

FACILITY (ID #)	SOURCES	VIOLATION	REGULATION	VN #	NTC #
Four Mile (7216)	1	No Leak and Repair Checklists 2 Vapor Leaks (100 ppm)	11-16-309.2 11-16-309.2.4	30781	35013
New Economy (7241)	1	No Leak and Repair Checklists No Trained Operator Certificate	11-16-309.2 11-16-310.1	30782	35505
Virginia (4537)	1	Vapor Leak (> 2,500 ppm)	11-16-309.2.5	30783	
Euwell (4460)	1	No Trained Operator Certificate Vapor Leak (< 100 ppm)	11-16-310.1 11-16-309.2.4		35507 35507
Flamingo (8855)	1	Vapor Leak (500 ppm)	11-16-309.2.5	30784	
Cal (2359)	1	Vapor Leak (> 100 ppm)	11-16-309.2.4		35508
ABC (3659)	1	Vapor Leak (2,500 ppm)	11-16-309.2.5	30785	
Dollar (3963)	2	Vapor Leak (< 100 ppm) Perchloroethylene Usage Exceeds Permit Condition	11-16-309.2.4 2-1-302		35509 35506
Fairfield (5693)	1	Open Container of Lint & Muck No Perc, Waste, Maintenance & Operating Records	11-16-309.1 11-16-501	27021	35000
Orchid (10911)	1	Lint Stored in Plastic Bag No Weekly Leak Logs Since 6/96	11-61-309.1.8 11-16-309.2	27017 27017	
Lucky (7931)	1	In Compliance			
Family (10895)	1	No Permit To Operate Primary Control System Not Operating Non Compliant Waste Water Evaporator No Leak Detector No Trained Operator Certificate Mileage, Leak Detection, Maintenance, Solvent Delivery and Hazardous Waste Disposal Records Not Kept	2-1-302 11-16-305.1 11-16-309.1 11-16-309.2 11-16-310.1 11-16-501	27018 27019 27019 27020 27020	35001



FACILITY (ID #)	SOURCES	VIOLATION	REGULATION	VN #	NTC #
Highlander (312)	1	No Leak Checks With Detector Primary Control System Not Operating	11-16-305.1 11-16-309.2	27023 27023	
Crystal (973)	1	Open Container of Muck Permit Not Posted	11-16-309.1 2-1-405	27022	35002
Fashion (8158)	1	No Maintenance Checklist No Poundage Records For 4/97 No Perchloroethylene Invoices	11-16-501		35003 35003 35003
Sunrise (5400)	1	In Compliance			
Village Oaks (9832)	1	No Leak Check List Incomplete Poundage Log/No Perc Purchase Records for '96	11-16-309.2 11-16-501	27025	35529
Parc Fifty-Five (4402)	1	Liquid Leak (90 drops/minute)	11-16-309.2.5	29843	
Comet (3480)	1	No Leak Check List	11-16-309.2	29844	
Diamond (10300)	1	In Compliance			

**Appendix B-2-5**  
**Industrial Operations**



**INDUSTRIAL SOURCE INSPECTION RESULTS SUMMARY**  
**(Legend of Violations on Next Page)**

FACILITY (ID #)	SOURCES INSPECTED	NOV	NTC
PE Berkeley (11326)	2 (In Compliance)		
Eagle Packaging (7718)	1		(1) OCS, RK
American Brass (62)	22 (In Compliance)		
Sonoma County Landfill (2254)	1	(1) LKS	
ECI Corporation (561)	5 (2 In Compliance)	(1) RK	
Integrated Environmental Services (1996)	1 (In Compliance)		
Tosco Carbon Plant (22)	2 (In Compliance)		
City Overhead Doors (11015)	1		(1) RK, OCS
United Technology (710)	6 (In Compliance)		
Quebecor Printing (207)	25 (In Compliance)		
United Airlines Maintenance (51)	19 (In Compliance)		
Kin's Cabinets (11253)	1		(1) RK, OCS
Paneltec (7481)	2	(1) UE	(1) PTONA, RK
Komag (3115)	50 (49 In Compliance)	(1) RK	
Stripping Workshop (11226)	3 (In Compliance)		
Calpine Gilroy (11180)	6 (In Compliance)		
E.I. duPont (21)	20 (14 In Compliance)	(3) LKS	(2) MT, LKS
Gaylord Containter (2120)	17 (16 In Compliance)		(1) RK, SLR(US)
Hexcel Corporation (54)	5 (5 In Compliance)	(1) SLR(US)	
Port of Redwood City (3134)	3 (In Compliance)		
Anheuser-Busch (606)	14 (In Compliance)		
PG & E Pittsburg (12)	19 (18 In Compliance)		(1) MD
Crockett Cogeneration (8664)	2 (In Compliance)		
C & H Sugar (33)	6 (In Compliance)		
Kaiser Cement (17)	7 (In Compliance)		
General Chemical (23)	25 (In Compliance)		
Goodman Ball (2831)	3 (2 In Compliance)		(1) SOL



FACILITY (ID #)	SOURCES INSPECTED	NOV	NTC
Owens Brockway (30)	56 (In Compliance)		
Schuller Roofing (119)	7 (5 In Compliance)	(2) APC, SOL	
Owens Corning (41)	16 (In Compliance)		

### Legend of Industrial Source Violations

LKS	Leaks
OCS	Open Container of Solvent
VOC	Volatile Organic Compound Content
SLR	Solvent Laden Rag
SOL	Clean-Up Solvent Usage Limit
APC	Air Pollution Control Equipment Not Operating
RK	Recordkeeping
UE	Unpermitted Equipment
PTONA	Permit To Operate Not Available
MT	Missing Tags
MD	Minor Defect
RA	Right of Access
US	Unidentified Source

### Industrial Source Inspection Results

FACILITY (ID #)	SOURCE (ID #)	VIOLATION	REGULATION	VN #	NTC #
PE Berkeley (11326)	40,41	In Compliance			
Eagle Packaging (7718)	Spray Booth (1)	Open Container Solvent Records Aerosol Records	8-19-320 8-19-501/2-1-307 2-1-307		34356 34356 34356
American Brass (62)	1-5,7-11,13,14,17,20,21,23-29	In Compliance			
Sonoma County Landfill (2254)	Landfill Gas Collection System (1)	Gas Leaks	8-34-303	29689	
ECI Corporation (561)	Paint Spray Booths (2,3,7) 5,6	Inadequate Records In Compliance	8-19-501.2	28794	
Integrated Env Services (1996)	Medical Waste Incinerator (6)	In Compliance			
Tosco Carbon Plant (22)	6,25	In Compliance			
City Overhead Doors (11015)	Paint Spray Booth (2)	Records not available Open Containers	8-23-501/2-1-307 8-1-321		34296 34296
United Technology (710)	25,30,61,101,103,120	In Compliance			
Quebecor Printing (207)	1-10,12,13,18,19,21,24-28,30, 35-38	In Compliance			
United Airlines Maintenance Operations Center (51)	38,41-44,53,82,118,119,122,200, 214,215,226,253-256,264	In Compliance			
Kin's Cabinets (11253)	Spray Area (1)	Open Containers Incomplete Records	8-1-321 8-32-501/2-1-307		34141 34141
Paneltec (7481)	Screen Printers (1,2) Screen Printers (1,2) None.	No PTO available No Records available Unpermitted Equipment	2-1-405 2-1-307 2-1-301/302	29929	33817 33817

FACILITY (ID #)	SOURCE (ID #)	VIOLATION	REGULATION	VN #	NTC #
Komag (3115)	Water Evaporator (29) 7-19, 27,28,30-48,53-58,63-71	Water Throughput Records In Compliance	2-1-307	30726	
Stripping Workshop Service Group (11226)	1,2,3	In Compliance			
Calpine Gilroy Cogen (11180)	100-104,108	In Compliance			
E.I. duPont (21)	Container Loading (126-7) Transloading HCFC (134) Boiler (2) Boiler (2) Hydrocarbon Blending Tank (135) Solvent Blend Tank (19) 4,19,24,52,55,56,65-67,77,100, 126-128	Leak Leak Leak Missing tags on two valves Leaks Leaks In Compliance	8-18-303 8-18-303 8-18-303 8-18-402.1 8-18-302 8-18-302	30232 30233 30234	33005 33006 33006
Gaylord Container (2120)	Boiler # 1 (1) Unidentified Source 9,31-36,38-46	No monthly summaries Solvent laden rag In Compliance	2-1-307 8-16-303.2.3		33007 33007
Hexcel Corp (54)	Unidentified Source 18,37,49,64,67	Open drums w/solvent laden rags In Compliance	8-12-305	29281	
Port of Redwood City (3134)	3,4,5	In Compliance			
Anheuser-Busch (606)	1-3,11-14,36,66-69,73,74	In Compliance			
PG & E Pittsburg (12)	GDF (58) 1-7,57,62-68,70,71	Return hose has a loop In Compliance	EO-G-70-116-F		Minor Defect
Crockett Cogeneration (8664)	201,204	In Compliance			
C & H Sugar (33)	59,67,234,236,285,286	In Compliance			
Kaiser Cement (17)	154,171-173,201,202,210	In Compliance			

FACILITY (ID #)	SOURCE (ID #)	VIOLATION	REGULATION	VN #	NTC #
General Chemical (23)	1-3,5-11,13-22,28-32	In Compliance			
Goodman Ball (2831)	Spray Booth (3) 2,4	MEK Clean-Up Limit Exceeded In Compliance	2-1-307		33134
Owens Brockway (30)	10-12,24,25,27,29-33,39,41-44,48, 50,52,56-58,63,67,75-77,79-81,83, 84,97,102-108,110-118,120-122, 124-128	In Compliance			
Schuller Roofing Systems (119)	Fuel Asphalt Storage Tank (20)	Fiber bed filter not in operation during operation of the tank.	2-1-307	28644	
	Wipe Cleaning Operation (90) 80,91,92,93,95	Exceeded usage limit of 5 gals/day In Compliance	2-1-307	28643	
Owens Corning Fiberglas (41)	1-4,19-22,69,70,86,87,155-158	In Compliance			





**Appendix B-2-6**  
**Refineries**



## Refinery Inspection Results Summary

Facility (ID #)	Number of Sources Inspected	Number of Sources In Violation of 8-18-303 <sup>(1)</sup>	Other Violations
Chevron (10)	6	6	
Tosco (13)	7	2	8-18-502.2 <sup>(2)</sup>
Tosco (16)	4	4	
Shell (11)	13	1	8-8-302.4 <sup>(3)</sup> 1-440 <sup>(4)</sup>

- (1) 8-18-303: Connector leaks shall not exceed 100 ppm.
- (2) 8-18-502.2: Records shall be maintained of the date of all leak inspections and reinspections.
- (3) 8-8-302.4: Leaks from a wastewater separator shall not exceed 1000 ppm.
- (4) 1-440: Access shall be provided to the facility and any equipment.



## Refinery Inspection Results

FACILITY (ID #)	SOURCE (ID #)	VIOLATION	REGULATION	VN #	NTC #
Chevron (10)	F-3550 Furnace @ # 4 Cat Reformer (4038)	1 Connector Leak (>500 ppm)	8-18-303	29637	33706
	F-3560 Furnace @ # 4 Cat Reformer (4039)	2 Connector Leaks (150/200 ppm)	8-18-303		
		1 Connector Leak (>500 ppm)	8-18-303	29638	
	F-3570 Furnace @ # 4 Cat Reformer (4040)	5 Connector Leaks (>500 ppm)	8-18-303	29639	
	F-3580 Furnace @ # 4 Cat Reformer (4041)	2 Spectacle Blind Leaks (10K ppm)	8-18-303	29640	33706
	# 4 Cat Reformer (4283)	3 Blind Flange Leaks (>500 ppm)	8-18-303	29150	
	Deisobutanizer (4355)	2 Connector Leaks (2.5/10K ppm)	8-18-303	29149	
		1 Connector Leak (200 ppm)	8-18-303		
Tosco (13)	Floating Roof Tank (311)	In Compliance	8-18-303	30455	
	No. 3 HDS (850)	1 Connector Leak			
	Recycle Gas Heater (973)	In Compliance			
	Fractionator Feed Heater (974)	In Compliance			
Tosco (16)	Sulfur Recovery Unit (1401)	In Compliance	8-18-303/8-18-502.2	30456	
	Sulfuric Acid Plant (1411)	In Compliance			
	Scott Tail Gas Unit (1420)	3 Connector Leaks			
Tosco (16)	Hydrocracker (307)	4 Connector Leaks (150-500 ppm)	8-18-303	30070	33508
	B401 Furnace (14) for Hydrocracker	2 Bull Plug Leaks (1000 ppm)	8-18-303		
	Crude Unit (350)	1 Pressure Gauge Leak (>500 ppm)	8-18-303		
	Marine Loading Terminal (425)	1 Sample Cap Leak (4000 ppm)	8-18-303		
Shell (11)	API Oil/Water Separator (1469)	Water Off/Cover Leak (10K ppm)	8-8-302.4	29325	
	Vessel 1533 (1802)	1 Connector Leak (5000 ppm)	8-18-303	29324	
	Storage Tank No. 14571 (4322)	Right of Access Delayed 70 minutes	1-440	30457	
	14,1084,1506,1507,1509-1512,2007,12116	In Compliance			

## Valve & Connector Defect Rate

Facility (ID #)	Source (ID #)	Accessible	Inspected	Violations (8-18-303)	Defect Rate
Chevron (10)	No. 4 Cat Reformer (4038,4039,4040,4041,4283) Deisobutanizer (4355)	1331 2576	121 280	16 3	5 %
Tosco (13)	No. 3 HDS (850) Recycle Gas Heater (973) Fractionator Feed Heater (974) Sulfur Recovery Unit (1401) Sulfuric Acid Plant (1411) Scott Tail Gas Unit (1420)	Not Determined	175 (all sources)	1 0 0 0 0 3	2%
Tosco (16)	Hydrocracker (307) B401 Furnace (14) for Hydrocracker Crude Unit (350) Marine Loading Terminal (425)	667	58 95 120 24	2 4 1 1	3%
Shell (11) *	Furnace F-61 CGH (1506) CO Boiler # 2 (1507) CO Boiler # 1 (1509) Furnace F-66 FCCU (1510) Furnace F-67 FCCU (1511) CO Boiler # 3 (1512) Vessel 1533 (1802)	39 40 59 36 48 48 70	Not Counted	0 0 0 0 0 0 1	Not Determined
<b>TOTALS</b>	<b>23</b>	<b>4,914</b>	<b>873</b>	<b>31</b>	<b>4%</b>

\* The defect rate at Shell Refinery was not determined because the number of valves and connectors inspected was not counted.



**Appendix B-2-7**  
**Automotive Refinishing**





# AUTOMOTIVE REFINISHING INSPECTION RESULTS SUMMARY

FACILITY (ID #)	SOURCES INSPECTED	NOV	NTC
Bay Cities (9156)	2 (1 In Compliance)		(1) OC, RK
Auto Collision Center (7976)	2 (In Compliance)		
Steve's Ultimate (5695)	1	(1) RK	
Davies Detailing	1	(2) PTO, VOC, RK	(1) OC
D & F Autoshine (11263)	1	(1) RK	(1) OC
Barsottis Autobody (10823)	2 (1 In Compliance)		(1) OC, RK
BBC Autobody (10880)	1	(1) SCL	(1) OC, PPTO
Rhodwork (7792)	1	(1) IF	(2) RK, SOL
Cordoza Body & Frame (9520)	1	(1) SCL, RK	
Best Auto Painting (2814)	4 (3 In Compliance)		(1) RK
Golden Gate Acura/Cadillac (3667)	2 (In Compliance)		
Excell Car Pros (10901)	1 (In Compliance)		
West Bay Autobody (10909)	1	(1) SCL	(1) SLR, OC
JK Autobody (11223)	1		(1) OC
Bill Lang Pontiac (4152)	2 (1 In Compliance)		(1) RK
San Pablo Autobody (10857)	1	(1) VOC, RK	

## Legend of Autobody Violations

OC	Open Container of Paint/Solvent
VOC	Volatile Organic Compound Content Exceeded
SOL	Solvent Limit Exceeded
SCL	Specialty Coating Limit Exceeded
SLR	Solvent Laden Rag
IF	Inadequate Filtration
RK	Recordkeeping
PTO	No Permit To Operate
PPTO	Permit To Operate Not Posted

### Automotive Refinishing Inspection Results

FACILITY (ID #)	SOURCES	VIOLATION	REGULATION	VN #	NTC #
Bay Cities (9156)	2	Open Container Incomplete Monthly Solvent Records	8-45-308.2 8-45-501.4		35036 35036
Auto Collision Center (7976)	2	None.			
Steve's Ultimate (5695)	1	Weekly Coating Records	8-45-501.2	30778	
Davies Detailing (Unpermitted)	1	No Permit To Operate Open Containers VOC Content No Weekly Records	2-1-301/302 8-45-308.2 8-45-308.4 8-45-501.2	30777  30776 30776	35504
D & F Autosshine (11263)	1	Incomplete Monthly Solvent Records No Coating Records Open Containers	8-45-501 8-45-501 8-45-308.2	30125 30125	35430
Barsottis Autobody (10823)	2	Open Containers Daily Coating & Monthly Solvent Logs Missing	8-45-308.2 8-45-501		35429 35429
BBC Autobody (10880)	1	Open Containers Permit To Operate Not Posted Specialty Coating Limit Exceeded	8-45-308.2 2-1-405 8-45-312	  30549	35020 35020
Rhodwork (7792)	1	Inadequate Filtration Recordkeeping Solvent Limit Exceeded	8-45-316 8-45-501 2-1-307	29407	35432 35432
Cordoza Body & Frame (9520)	1	Specialty Coating Limit Exceeded Incomplete Monthly Solvent Records	8-45-312 8-45-501.4	30523 30523	
Best Auto Painting (2814)	4	Coating Records	8-45-501.2		34999
Golden Gate Acura/Cadillac (3667)	2	None.			

FACILITY (ID #)	SOURCES	VIOLATION	REGULATION	VN #	NTC #
Excell Car Pros (10901)	1	None.			
West Bay Autobody (10909)	1	Solvent Laden Rags Open Containers Specialty Coating Limit Exceeded	8-45-308.1 8-45-308.2 8-45-312	30676	35021 35021
JK AB (11223)	1	Open Container	8-45-308.2		35022
Bill Lang Pontiac (4152)	2	Monthly Totals Not Kept	8-45-501		35431
San Pablo AB (10857)	1	Usage of High VOC Primer Filler No Primer Log	8-45-301.1 8-45-501.2	30779 30779	



**Automotive Refinishing Violations**  
**Regulation 8, Rule 45, (Sections 301-501), Motor Vehicle and Mobile Equipment Coating Operations**

Facility / ID #	301	302	303	304	305	306	308	311	312	313	314	316	501
Bay Cities (9156)							x						x
Auto Collision Center (7976)													
Steve's Ultimate (5695)													x
Davies Detailing (Unpermitted)							x						x
D & F Autoshine (11263)							x						x
Barsottis Autobody (10823)							x						x
BBC Autobody (10880)							x		x				
Rhodwerk (7792)												x	x
Cardoso Body & Frame (9520)									x				x
Best Auto Painting (2814)													x
Golden Gate Acura/Cadillac (3667)													
Excel Car Pros (10901)													
West Bay Autobody (10909)							x		x				
JK Autobody (11223)							x						
Bill Lang Pontiac (4152)													x
San Pablo Autobody (10857)	x												x

301: VOC Limits    308: Closed Containers    312: Specialty Coating VOC Limit    316: Filtration    501: Coating Records

### Automotive Refinishing Facilities Not Inspected By ARB

Facility (ID #)	Address	Comments
H & S Body & Paint (11005)	459 Auzerais Street, San Jose	Shop manager or owner not available on 4/14/97. BAAQMD inspected this facility on 4/17/97 and found it to be operating in compliance.
Wiltz Auto Restoration (11105)	486 Fleming Avenue, San Jose	BAAQMD inspected this mobile operation on 4/23/97 without ARB and issued VN # 30522 for no monthly solvent usage log.
Perfection LTD (8510)	1355 Park Avenue, Emeryville	Owner not available on 4/25/97.
Goff's Autobody (10901)	111 Willow Street, Redwood City	Shop no longer doing business at this address.
Good Body (6926)	50 Lisbon # 5, San Rafael	Owner not available on 4/25/97.



**Appendix B-2-8**  
**Cargo Tank Operations**





**Gasoline Cargo Tank Inspections**  
**April 9, 10 & 11, 1997**

Terminal	Cargo Tanks Inspected	Vapor & Liquid Leak Checks	Vapor Leaks Found	Liquid Leaks Found	Checked For Certifications Only	Cargo Tanks Not Certified	Comments
Chevron (Avon)	10	8	1	0	2	0	Violation Notice: vapor leak 100K+
Time Oil	2	1	0	0	1	0	Initial problems starting source test
Unocal	13	5	1*	0	8	2*	Violation Notice: 2 uncertified cargo tanks & 1 vapor leak
ARCO	14	9	1	0	5	0	Violation Notice: vapor leak
<b>TOTALS</b>	<b>39</b>	<b>23</b>	<b>3</b>	<b>0</b>	<b>16</b>	<b>2</b>	

\* Violation Notices for two uncertified cargo tanks and a vapor leak issued to the same company (truck & trailer)



**Appendix B-2-9**  
**ARB Source Test Results**





## ARB Source Test Results

Facility	Device Tested	Emission Limit	Emissions	Compliance
Time Oil (Richmond)	Vapor Recovery Unit	0.08 lbs NMHC/Kgal	0.00078 lbs NMHC/Kgal	Yes
Chevron USA (Avon)	Vapor Recovery Unit	0.08 lbs NMHC/Kgal	0.00077 lbs NMHC/Kgal	Yes
ARCO (Richmond)	Vapor Recovery Unit	0.08 lbs NMHC/Kgal	0.0119 lbs NMHC/Kgal	Yes
Exxon (Benicia)	Main Stack serving FCCU, Coker Burner & (2) CO Furnaces	300 ppm (NOx)	213 ppm @ 3% O <sub>2</sub>	Yes
		1000 ppm (SO <sub>2</sub> )	567 ppm	Yes
Exxon (Benicia)	Tail Gas Treating Unit serving (2) Sulfur Recovery Units	300 ppm (NOx)	None Detected	Yes
		250 ppm (SO <sub>2</sub> )	None Detected	Yes
Shell Oil (Martinez)	FCC/CO Boiler # 1	300 ppm (NOx)	168 ppm	Yes
	FCC/CO Boiler # 2	1000 ppm (SO <sub>2</sub> )	101 ppm	Yes
		300 ppm (NOx)	163 ppm	Yes
	FCC/CO Boiler # 3	1000 ppm (SO <sub>2</sub> )	109 ppm	Yes
		300 ppm (NOx)	123 ppm	Yes
		1000 ppm (SO <sub>2</sub> )	76 ppm	Yes
Tosco (Martinez)	Boiler # 6	No NOx limit	64 ppm	Yes
		No SO <sub>2</sub> limit	11 ppm	Yes
Chevron USA (Richmond)	Sulfur Recovery Unit # 2	250 ppm (SO <sub>2</sub> )	22 ppm @ 0% O <sub>2</sub>	Yes
	Sulfur Recovery Unit # 3	250 ppm (SO <sub>2</sub> )	54 ppm @ 0% O <sub>2</sub>	Yes
General Chemical (Richmond)	Sulfuric Acid Plant	300 ppm (SO <sub>2</sub> )	199 ppm @ 12% O <sub>2</sub>	Yes
Tosco (Rodeo)	Coke Calciner	400 ppm (SO <sub>2</sub> )	303 ppm	Yes
		250 lb/hr (SO <sub>2</sub> )	198 lb/hr	Yes
Rhone Poulenc (Martinez)	Sulfuric Acid Plant	300 ppm (SO <sub>2</sub> )	151 ppm @ 12% O <sub>2</sub>	Yes



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